



IRENEC 2025

15. ULUSLARARASI %100
YENİLENEBİLİR ENERJİ KONFERANSI

15th INTERNATIONAL 100%
RENEWABLE ENERGY CONFERENCE

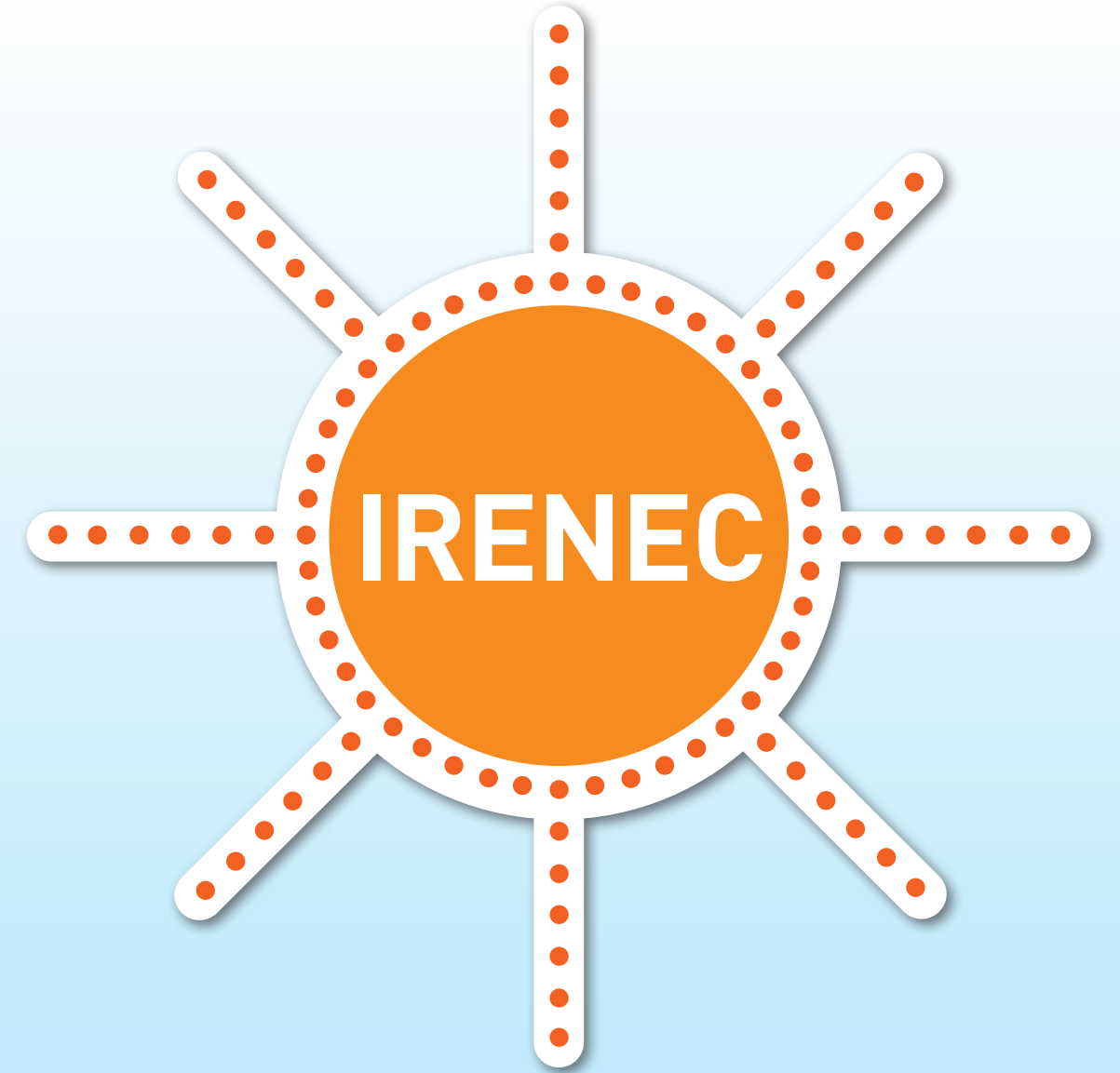
**2030'a Kadar İklim Nötr Türkiye ve
Avrupa Şehirlerine Doğru**
Towards Climate Neutral Turkish and
European Cities by 2030

14-16 Mayıs 2025 / 14-16 May 2025

YENİLENEBİLİR
ENERJİ BİRLİĞİ

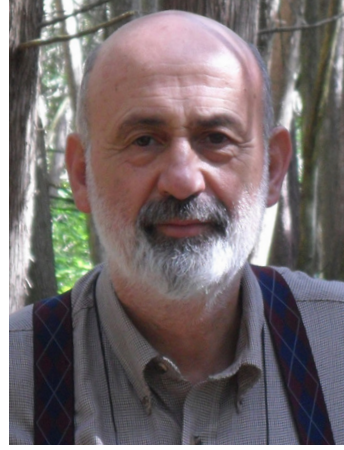
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YENİLENEBİLİR ENERJİ KONFERANSI**

**15th INTERNATIONAL
100% RENEWABLE ENERGY CONFERENCE**

Tanay Sıdkı UyarEUROSOLAR Türkiye
Başkanı**YENİLENEBİLİR
ENERJİ BİRLİĞİ**EUROSOLAR
Türkiye

JRC (Ortak Araştırma Merkezi), Avrupa Birliği politikasına bağımsız bilimsel tavsiye ve destek sağlamak amacıyla araştırma yürütmek üzere bilim adamlarını istihdam eden Avrupa Komisyonu'nun bilim ve bilgi hizmetidir.

JRC, 30 Ocak'ta Yeşil Mutabakatın geniş kapsamlı hedeflerine ulaşmada kaydedilen ilerlemenin en kapsamlı çalışmasını yayınladı. Yeşil Mutabakat, 2030 yılına kadar sera gazı emisyonlarını %55 oranında azaltmayı, 2050 yılına kadar iklim nötrlüğüne ulaşmayı ve kaynak açısından verimli bir ekonomiyi hedefliyor. Enerji, ulaşım, dairesel ekonomi, tarım ve gıda, ekosistemler ve biyolojik çeşitlilik, su, toprak ve hava kirliliğini kapsayan sektörlerdeki destekleyici önlemlere dayanıyor.

Sistemik analiz, temiz enerjiden biyolojik çeşitliliğe ve sıfır kirlilik hedeflerine doğru ilerlemeyi grafiksel olarak gösteriyor ve İklim Eylem İlerleme Raporu'na atıfta bulunuyor. <https://publications.jrc.ec.europa.eu/repository/handle/JRC140372>

Özet: Bu rapor, Avrupa Birliği'nin 2050 yılına kadar iklim nötrlüğüne ulaşmaya yönelik dönüştürücü gündemi olan Avrupa Yeşil Mutabakatına (EGD) doğru ilerlemenin kapsamlı bir değerlendirmesini sunmaktadır. Analiz, iklim, enerji, döngüsel ekonomi, ulaşım, tarım ve gıda, ekosistemler ve biyolojik çeşitlilik, su, toprak ve hava kirliliği gibi temel sektörlerde 2019 ile 2024 yılları arasında 44 politika belgesinden 154 ölçülebilir hedefi kapsamaktadır.

Çalışma, şu ana kadar önemli başarılar elde edildiğini ancak birçok alanda ilerlemenin hızlanması gerektiğini göstermektedir. 2024 ortası itibarıyla, 154 hedeften 32'si şu anda "yolda" ve 64'ü "hızlanma gerekiyor" olarak tanımlanmaktadır; bu da hedeflere zamanında ulaşmak için daha fazla ilerleme gerektiği anlamına gelmektedir. Ayrıca, hedeflerin 15'inin "ilerlemediği" veya "gerilediği" ve hedeflerin 43'ü için şu anda veri bulunmadığı tespit edilmiştir. Çoğu yakın zamanda kabul edilen ve önümüzdeki yıllarda sonuç vermesi beklenen bağlayıcı politikaların zamanlaması, bu değerlendirmeleri etkileyen önemli bir faktördür.

Bu rapor, tüm EGD eylemlerini ve ilgili politikaları entegre ederek, sağlam veri ve bilime dayalı olarak AB'nin yeşil geçişinin bir değerlendirmesini sunar. Kısa vadeli uygulama hedeflerini karşılamak ve 2050 yılına kadar sürdürülebilir, adil, hakkaniyetli ve iklim açısından nötr bir Avrupa'nın uzun vadeli hedeflerine katkıda bulunmak için yoğunlaştırılmış çabalar için öncelikli alanları belirler. Bu kolektif çalışma, gelecekteki AB politikaları ve programları için bilimsel olarak temellendirilmiş rehberlik sağlayan bir kıyaslama aracı olarak hizmet eder.

Yeşil Mutabakat hedeflerine doğru ilerleme

Çalışma, Yeşil Mutabakatı oluşturan 154 bağlayıcı ve bağlayıcı olmayan hedefi belirler ve mevcut bilgi ve verilere dayanarak bunlara ulaşmada kaydedilen ilerlemenin bir anlık görüntüsünü sunar.

Yeşil Mutabakata doğru ilerlemeyi kolayca yönlendirmeye yardımcı olmak için yedi tematik alana ayrılırlar: iklim tutkusu; temiz, uygun fiyatlı ve güvenli enerji; dairesel ekonomi; sürdürülebilir ve akıllı mobilite; ortak tarım politikasının ve 'Çiftlikten Çatala' stratejisinin yeşillendirilmesi; biyolojik çeşitliliğin korunması ve kollarlanması; ve toksik olmayan bir çevre için sıfır kirliliğe doğru ilerleme.

Temel bulgular

154 hedeften 32'si şu anda 'yolda' ve 64'ü 'hızlanma gerekiyor' olarak tanımlanıyor, yani çalışıyorlar ancak hedeflere zamanında ulaşmak için daha fazla ilerleme gerekiyor. Hedeflerden 15'inin 'ilerlemediği' veya 'gerilediği' ve hedeflerin 43'ü için şu anda veri bulunmadığı bulundu.

Avrupa'nın sürdürülebilir dönüşümüne yönelik önemli ilerleme birçok alanda sağlandı. Örneğin, sera gazı emisyonları sürekli olarak azalıyor ve enerji ve endüstri gibi önemli sektörlerde önemli azalmalar elde ediliyor. Geri dönüşüm ve sürdürülebilir üretim süreçlerindeki ilerlemeler, temiz ve dairesel bir ekonomiye geçişi yönlendiriyor, atık sorununu ele alıyor ve Avrupa'nın sınırlı kaynaklara olan bağımlılığını azaltma ihtiyacını vurguluyor.

İlerleme umut verici olsa da, bazı alanlarda 2030 hedeflerine ve ötesine ulaşmak için daha fazla eylem şart. Örneğin, enerji sektöründe yenilenebilir enerji %42,5 hedefine ulaşmak için daha hızlı büyümeli ve altyapı ve inovasyona yapılan yatırımlarla desteklenmelidir. Korunan alanların genişletilmesi ve ekosistemlerin restore edilmesi, biyolojik çeşitlilik kaybını tersine çevirmek için çok önemli olacaktır. İlerlemeyi izlemek için iyileştirilmiş veri ve izleme sistemlerine de ihtiyaç vardır; hedeflerin %28'i bugün yeterli veriye sahip değildir.

Karma sonuçlar: Avrupa 2050'ye doğru yolda mı?

İlerleme, Yeşil Mutabakat kapsamındaki birçok yasama girişiminin, Doğa Restorasyon Yasası gibi, yakın zamanda kabul edilmesi ve henüz uygulanmaması nedeniyle karışık bir ilerlemedir. Diğerleri tartışılıyor veya önemli sonuçlar elde edilmeden önce uzun bir ön süre var. Farklı hedeflerde doğru yolda olup olmadığımızı belirlemek, Yeşil Mutabakatın iddialı hedeflerine ulaşmak ve gezegenin sınırları içinde Avrupa vatandaşları için kapsayıcı refahı sağlamak için daha fazla eylemin nerede gerekli olduğunu anlamak için önemlidir.

Çalışma, yüksek endişe duyulan bazı alanları tanımlıyor: ya ilerlemenin yolunda olmadığı yerler ya da ilerlemeyi ölçmek için verilerin mevcut olmadığı yerler. Örneğin, yaygın kuş popülasyonları 2010'dan beri iyileşmeye dair olumlu işaretler gösteriyor, ancak tarım arazisi kuş popülasyonları istikrarlı bir şekilde azalmaya devam ediyor.

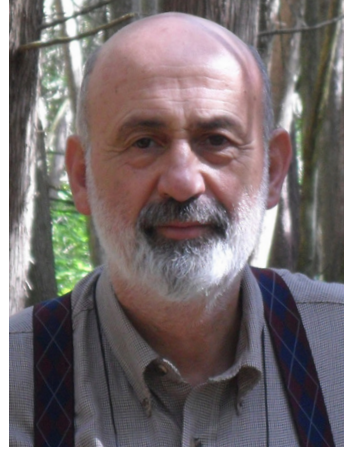
Daha hızlı ilerleme gerekiyor

Çalışma, Yeşil Mutabakatta ilerlemek için doğru yolda olduğumuzu gösteriyor. Çoğu politika ve destekleyici araç yerinde ve sonuç vermeye başlıyor. Ancak, 2030 ve 2050 için iddialı hedeflere ulaşmak için ilerlemenin birçok alanda hızlanması gerekiyor.

Yeşil Mutabakat kapsamındaki hedeflere ulaşmak için bu politikaların Üye Devlet düzeyinde önlemlerle tam olarak uygulanması ve uygulanması hayati önem taşımaktadır. Tüm sektörlerde sistem değişiklikleri sunmak ve daha sorumlu tüketim ve üretim modellerine geçiş yapmak hayati önem taşımaktadır.



Tanay Sıdkı Uyar

EUROSOLAR Türkiye
PresidentRENEWABLE ENERGY
ASSOCIATIONEUROSOLAR
Türkiye

On 30 January, the JRC (Joint Research Center) published the most comprehensive study of the progress being made in delivering on the wide-ranging objectives of the Green Deal. The Green Deal aims at cutting greenhouse gas emissions by 55% by 2030, reaching climate neutrality by 2050, and at a resource-efficient economy. It builds on supporting measures across sectors covering energy, transport, circular economy, agriculture and food, ecosystems and biodiversity, water, soil and air pollution.

The systematic analysis charts progress from clean energy to biodiversity and zero pollution goals, and refers to the Climate Action Progress Report. <https://publications.jrc.ec.europa.eu/repository/handle/JRC140372>

Abstract: This report provides a comprehensive assessment of progress towards the European Green Deal (EGD), the European Union's transformative agenda for achieving climate neutrality by 2050. The analysis encompasses 154 quantifiable targets from 44 policy documents between 2019 and 2024 across key sectors such as climate, energy, circular economy, transport, agriculture and food, ecosystems and biodiversity, water, soil and air pollution.

The study shows that significant achievement has been delivered so far but progress needs to accelerate in many areas. As of mid-2024, 32 of the 154 targets are currently "on track" and 64 are identified as "acceleration needed" meaning that more progress is needed to meet the targets on time. Furthermore, 15 of the targets are found to be "not progressing" or "regressing", and for 43 of the targets no data is currently available. The timing of the binding policies, most of which have been recently agreed and are expected to deliver results in the coming years, is a significant factor influencing these assessments.

This report integrates all EGD actions and related policies, offering an assessment of the EU's green transition based on robust data and science. It identifies priority areas for intensified efforts to meet short-term implementation goals and contribute to the long-term ambition of a sustainable, fair, just, and climate-neutral Europe by 2050. This collective work serves as a benchmarking tool, providing scientifically grounded guidance for future EU policies and programmes.

Progress towards Green Deal targets

The study identifies 154 binding and non-binding targets that make up the Green Deal and provides a snapshot of the progress in achieving them, based on available knowledge and data.

They are broken down into seven thematic areas to help easily navigate the progress towards the Green Deal: climate ambition; clean, affordable, and secure energy; circular economy; sustainable and smart mobility; greening the common agricultural policy and the 'Farm to Fork' strategy; preserving and protecting biodiversity; and advancing towards zero pollution for a toxic-free environment.

Key findings

Of the 154 targets, 32 are currently 'on track' and 64 are identified as 'acceleration needed', meaning that they are working but more progress is needed to meet the targets on time. 15 of the targets are found to be 'not progressing' or 'regressing', and for 43 of the targets no data are currently available.

Significant progress towards Europe's sustainable transformation has been delivered in many areas. For example, greenhouse gas emissions are consistently decreasing, with substantial reductions achieved in key sectors like energy and industry. Advances in recycling and sustainable production processes are driving the transition to a clean and circular economy, addressing waste and highlighting the need to reduce Europe's reliance on finite resources.

While the progress is promising, more action is essential to achieve the 2030 targets and beyond in some areas. For example, in the energy sector, renewables must grow faster to meet the 42.5% target and must be supported by investments in infrastructure and innovation. Expanding protected areas and restoring ecosystems will be crucial to reverse biodiversity loss. Improved data and monitoring systems are also needed to track progress, with 28% of targets lacking sufficient data today.

Mixed results: is Europe on track for 2050?

Progress is mixed progress because many legislative initiatives under the Green Deal have only recently been adopted, like the Nature Restoration Law, and are not yet being implemented. Others are being discussed or have a long lead time before significant results can be achieved. Identifying whether we are on track on the different targets is essential to understand where more action is needed to achieve the ambitious goals of the Green Deal, and to ensure inclusive wellbeing for European citizens within the limits of the planet.

The study identifies some areas of high concern: either where progress is not on track or where data are not available to measure progress. For example, common bird populations have been showing positive signs of recovery since 2010, but farmland bird populations continue to decline steadily.

Faster progress needed

The study shows that we are on the right path to progress on the Green Deal. Most policies and supporting tools are in place and starting to deliver results. However, to reach the ambitious targets for 2030 and 2050, progress needs to accelerate in many areas.

Full implementation and applying these policies through measures at Member State level is crucial to achieve the targets under the Green Deal. It is crucial to deliver system changes across all sectors and shift towards more responsible consumption and production models.

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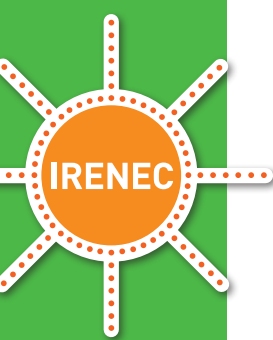
14 Mayıs 2025 Çarşamba

14 Mayıs 2025 Çarşamba			
09.00 - 10.00	Açılış Oturumu		
Konuşmacılar	Tanay Sıdkı UYAR	Mühendislik ve Mimarlık Fakültesi, İstanbul Beykent Üniversitesi Başkan, Yenilenebilir Enerji Birliği EUROSOLAR Türkiye	
	Kazım SARI	Rektör Yardımcısı, İstanbul Beykent Üniversitesi, Türkiye	
	Wolfgang PALZ	AB Yetkilisi (emekli), Brüksel, Belçika	
10.00 - 11.30	Yenilenebilir Enerji Dernekleri Oturumu		
Moderatör	Tanay Sıdkı UYAR	Başkan, Yenilenebilir Enerji Birliği EUROSOLAR Türkiye	
Konuşmacılar	İbrahim ERDEN	Yönetim Kurulu Başkanı, Türkiye Rüzgar Enerjisi Birliği (TÜREB)	Türkiye Rüzgarında Yeni Dönem: Büyüme, Yatırım ve Küresel Rekabet
	Hakan ERKAN	Genel Sekreter, Güneş Enerjisi Sanayicileri ve Endüstrisi Derneği (GENSED), Türkiye	Geçmişten Geleceğe Türkiye’de Güneş Enerjisi
	Mehmet Nazım YAVUZ	Yönetim Kurulu Üyesi, Uluslararası Güneş Enerjisi Topluluğu (GÜNDER), Türkiye	Türkiye’nin Güneşi Yükseliyor: Ulusal Stratejiler ve GÜNDER’in Yol Haritası
	Ali KİNDAP	Başkan, Jeotermal Enerji Derneği (JED), Türkiye	Sonsuz ve Sürdürülebilir Kaynağımız Jeotermal ile Enerjide Bağımsızlık
11.30 - 12.00	Davetli Konuşmacı		
	Eberhard WAFFENSCHMIDT	Başkan, Almanya Güneş Enerjisi Destekleme Derneği	Karbonsuz Enerji Tedariki için Elektrik Güç Şebekelerini İyileştirmek için Makine Öğrenimi Algoritmaları
12.00 - 12.30	Ara		
12.30 - 13.00	Davetli Konuşmacı		
	Thomas OSDOBA	Program Direktörü, NetZeroCities Şehirler Ekip Lideri, Fransa	
13.00 - 14.00	Finansman Oturumu		
Moderatör	Tanay Sıdkı UYAR	Başkan, Yenilenebilir Enerji Birliği EUROSOLAR Türkiye	
Konuşmacılar	Erdem ÜNCÜ	İnşaat ve Yer Mühendislik Müdürü, Borusan EnBW Enerji, Türkiye	Rüzgar Enerji Santral Projelerinde Mühendislik ve Proje Yönetimi
	Seray İMER	Sürdürülebilirlik Direktörü, İŞ ENERJİ, Türkiye	Sürdürülebilir Finans ve Yenilenebilir Enerji Yatırımları Merkezinde Yeşil Dönüşüm
	Seçil Kızılkaya YILDIZ	Türkiye Kalkınma Yatırım Bankası	Yeşil Dönüşüm
14.00 - 14.30	Davetli Konuşmacı		
	Şener OKTİK	Maltepe Üniversitesi Mühendislik ve Doğa Bilimleri Fakültesi, Türkiye	2025 yılında Güneşten Doğrudan Elektrik Üretme (Fotovoltaik) Çevrim Teknolojilerinde Yarışın Yönü
14.30 - 14.45	Ara		
14.45 - 16.00	Belediyelerin İklim Enerji Çalışmaları		
Moderatör	Tanay Sıdkı UYAR	Başkan, Yenilenebilir Enerji Birliği EUROSOLAR Türkiye	
Konuşmacılar	Berker ELBELİ	Park ve Bahçeler Müdürü, Saray Belediyesi, Tekirdağ, Türkiye	Yerel Çözümler İle Sürdürülebilir Kalkınma; Saray Belediyesi’nin Çevre Dostu Projeleri
	Sercan KIRIK	Destek Hizmetleri Müdürü, Merzifon Belediyesi,Türkiye	Merzifon Belediyesi’nin BM Sürdürülebilirlik Hedefleri, IPCC Karbon Emisyonları ve Kummings – Montreal Biyoçeşitlilik Protokolü’ne Bağlılık Bildirgesi
	Ceyda Kazancıoğlu KAYNAR	Strateji Geliştirme Müdürü, Amasya Belediyesi, Türkiye	Yerel Yönetimlerde İklim Eylemi ve Enerji Dönüşümü: Amasya Belediyesi’ nin Sürdürülebilirlik Stratejileri
16.00- 16.30	Davetli Konuşmacı		
	Edouard CLEMENT	İcra Direktörü, Enerji Modelleme Merkezi, Montreal, Kanada	Enerji Modelleme Merkezi (EMH) Montreal Kanada
16.30- 17.00	Davetli Konuşmacı		
	Oliver BAHN	Karar Analizi Çalışma ve Araştırma Grubu Direktörü (GERAD), HEC Montréal, Kanada	Küresel Enerji Manzarasında Hidrojen: Entegre Değerlendirme Modellemesinden Elde Edilen İçgörüler
17.00 - 17.30	Davetli Konuşmacı		
	Saied DARDOUR	Program Sorumlusu: Yenilenebilir Enerji Maliyetleri ve Görünümü IRENA Yenilik ve Teknoloji Merkezi (IITC) Bonn, Almanya	Küresel Enerji Dönüşümünde IRENA IITC’nin Rolü ve Başarıları

IRENEC 2025 PROGRAM

14 May 2025 Wednesday

14 May 2025 Wednesday			
09.00 - 10.00	Opening Session		
Speakers	Tanay Sıdkı UYAR	Faculty of Engineering and Architecture, Istanbul Beykent University President, Renewable Energy Association EUROSOLAR Türkiye	
	Kazım SARI	Vice Rector, Istanbul Beykent University	
	Wolfgang PALZ	EU Official (retired), Brussels ,Belgium	
10.00 - 11.30	Renewable Energy Associations Session		
Moderator	Tanay Sıdkı UYAR	Chairman, Renewable Energy Association EUROSOLAR Türkiye	
Speakers	İbrahim ERDEN	Chairman, Türkiye Wind Energy Association (TÜREB)	A New Era in Türkiye's Wind Energy: Growth, Investment, and Global Competitiveness
	Hakan ERKAN	Secretary General, Solar Energy Industrialists and Industry Association (GENSED), Türkiye	From Past to Future: Solar Energy in Türkiye
	Mehmet Nazım YAVUZ	Board Member, International Solar Energy Society (GÜNDER), Türkiye	Türkiye's Sun is Rising: National Strategies and GÜNDER's Roadmap
	Ali KİNDAP	Chairman, Geothermal Energy Association (JED), Türkiye	Infinite and Sustainable Resource: Energy Independence Through Geothermal
11.30 - 12.00	Invited Speaker		
	Eberhard WAFFENSCHMIDT	President, Solarenergie-Förderverein Deutschland	Machine Learning Algorithms to Improve Electrical Power Grids for a Carbon Free Energy Supply
12.00 - 12.30	Break		
12.30 - 13.00	Invited Speaker		
	Thomas OSDOBA	Program Director, NetZeroCities Team Leader for Cities, France	
13.00 - 14.00	Finance Session		
Moderator	Tanay Sıdkı UYAR	Chairman, Renewable Energy Association EUROSOLAR Türkiye	
Speakers	Erdem ÜNCÜ	Director of Construction and Geotechnical Engineering, Borusan EnBW Energy, Türkiye	Engineering and Project Management in Wind Power Plant Projects
	Seray İMER	Sustainability Director, İŞ ENERJİ, Türkiye	Sustainable Finance and Green Transformation with Renewable Energy Investments
	Seçil Kızılkaya YILDIZ	Development Investment Bank of Türkiye	Green Transition
14.00 - 14.30	Invited Speaker		
	Şener OKTİK	Maltepe University Faculty of Engineering and Natural Sciences, Türkiye	The Direction of the Race in Photovoltaic (PV) Conversion Technologies for Direct Electricity Generation from the Sun in 2025
14.30 - 14.45	Break		
14.45 - 16.00	Climate Energy Studies of Municipalities		
Moderator	Tanay Sıdkı UYAR	Chairman, Renewable Energy Association EUROSOLAR Türkiye	
Speakers	Berker ELBELİ	Director of Parks and Gardens, Saray Municipality, Tekirdağ, Türkiye	Sürdürülebilir Development through Local Solutions: Saray Municipality's Environmentally Friendly Projects
	Sercan KIRIK	Support Services Manager, Merzifon Municipality, Türkiye	Merzifon Municipality's Declaration of Commitment to UN Sustainability Goals, IPCC Carbon Emissions and Kummings - Montreal Biodiversity Protocol
	Ceyda Kazancıoğlu KAYNAR	Strategy Development Manager, Amasya Municipality, Türkiye	Climate Action and Energy Transition in Local Governments: Sustainability Strategies of Amasya Municipality
16.00- 16.30	Invited Speaker		
	Edouard CLEMENT	Executive Director, Energy Modelling Hub, Montreal, Canada	Energy Modelling Hub (EMH), Montreal Canada
16.30- 17.00	Invited Speaker		
	Oliver BAHN	Director of the Decision Analysis Study and Research group (GERAD), HEC Montréal, Canada	Hydrogen in the Global Energy Landscape: Insights from Integrated Assessment Modelling
17.00 - 17.30	Invited Speaker		
	Saied DARDOUR	Programme Officer: Renewable Energy Costs and Outlook IRENA Innovation and Technology Centre (IITC), Bonn, Germany	Role and Achievements of IRENA IITC in the Global Energy Transition



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15 Mayıs 2025 Perşembe

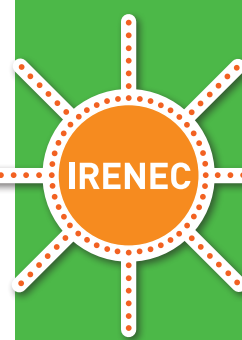
09.00 - 10.15	Yenilenebilir Enerji Dernekleri Oturumu		
Moderatör	Tanay Sıdkı UYAR	Başkan, Yenilenebilir Enerji Birliği EUROSOLAR Türkiye	
Konuşmacılar	Alper KALAYCI	Yönetim Kurulu Başkanı, Enerji Sanayicileri ve İş İnsanları Derneği (ENSIA), Türkiye	Türkiye'nin Temiz Enerji Görünümü
	Haluk SAYAR	Avrasya E-Mobilite Derneği Başkanı (AVERE Türkiye) ve E-Mobilite Avrupa Birliği Yönetim Kurulu Üyesi	Avrasya'da E-Mobilite Devrimi: 2025 ve Ötesi
	Murat DURAK	Başkan, Denizüstü Rüzgar Enerjisi Derneği (DÜREB), Türkiye	Denizüstü Rüzgar Enerjisi: Türkiye için Fırsatlar
10.15 - 10.30	Ara		
10.30 - 11.00	Davetli Konuşmacı		
	Christian RAKOS	Başkan, Dünya Biyoenerji Birliği (WBA), Stockholm, İsveç	Yenilenebilir Enerji Sistemine Geçişte Biyoenerjinin Rolü
11.00 - 12.30	Endüstri ve Enerji Dönüşümü		
Moderatör	Oğuzhan HAZNEDAR	Yönetim Kurulu Sayman Üyesi, Yenilenebilir Enerji Birliği EUROSOLAR Türkiye	
Konuşmacılar	Oğuzhan HAZNEDAR	Genel Müdür, Şule Enerji A.Ş. , Türkiye	Avrupa Birliği Sınırdaki Karbon Düzenlemesi (CBAM) ve Türkiye Sanayisinin Uyum Süreci
	Mehmet Akif ARDIÇ	Satış Müdürü, Kıvanç Enerji Üretim A.Ş. , Türkiye	Güneş Enerjisi Üretimi Hakkında Global Gelişmeler ve Türkiye Pazarı
	Serkan ÖZCAN	Genel Müdür, Chiron Group, Türkiye	Performans Hassasiyetle Buluşuyor
	İsmail YAVUZ	Servis Operasyon Müdürü, VESTAS, Türkiye	VESTAS Servis Çözümleri: Yenilikçi Yaklaşımlarla Rüzgar Enerjisinin Geleceğini Şekillendirmek
	Ender Nur	Enerji Ticaret Direktörü, Rönesans Holding, Türkiye	Türkiye Piyasasında Elektrik Ticareti ve Toplayıcılık
12.30 - 13.00	Davetli Konuşmacı		
	Hasan HEPERKAN	Öğretim Görevlisi, İstanbul Nişantaşı Üniversitesi Mühendislik Fakültesi, Türkiye	Avrupa Yeşil Mutabakatı'nın Binalarda Enerjinin Etkin Kullanımı ve Sistem Tasarımı Üzerindeki Etkisi
13.00 - 13.30	Ara		
13.30 - 14.15	Plenary Konuşmacı		
	İbrahim DİNÇER	Ontario Tech. Üniversitesi, Kanada, Yıldız Teknik Üniversitesi, Türkiye, Ulusal Hidrojen Enerjisi Derneği Başkanı, TÜBA-Enerji Çalışma Grubu Başkanı	Sürdürülebilir Bir Gelecek için Yeşil Hidrojen
14.15 - 14.45	Su-Enerji-Gıda-Ekosistem (WEFE) Nexus, Geleceğin Tarımı: Öncü Tarım Taşarısı Köyü Projesi		
	Tanay Sıdkı UYAR	Başkan, Yenilenebilir Enerji Birliği EUROSOLAR Türkiye	Su Enerji Gıda Ekosistem WEFE Nexus, Geleceğin Çiftçiliği: Öncü Tarım Taşarısı Köyü Projesi
14.45 - 15.00	Ara		
15.00 - 16.00	Kentlerin 2030'a Kadar İklim Tarafsız Olması için Gerekli İklim Eylemlerinde Belediye Meclislerinin ve Belediye Başkanlarının Rolü		
Moderatör	Tanay Sıdkı UYAR	Başkan, Yenilenebilir Enerji Birliği EUROSOLAR Türkiye	
Konuşmacılar	Abdül TAŞYASAN	Başkan, Saray Belediyesi, Tekirdağ, Türkiye	Saray'ın Yeşil Geleceği: Yerelden İklim Tarafsızlığa
	Bekdemir İŞBİLİR	Başkan Yardımcısı, Amasya Belediyesi, Türkiye	Amasya Belediyesi'nin Sürdürülebilirlik Vizyonu, Kültür-Sanatla Bütünleşen Çevreci Sosyal Belediyecilik
	Erkan ERGÜL	Merzifon Belediye Meclisi Sürdürülebilirlik Komisyon Başkanı - Belediye Meclis Üyesi, Türkiye	Merzifon'un 2030'a Kadar İklim Tarafsızlığı Hedefinde Belediye Meclisleri ve Belediye Başkanının Rolü
16.00 - 16.30	Davetli Konuşmacı		
	Talat ÖZDEN	Birim Koordinatörü, Modül Teknolojileri, ODTÜ GÜNAM, Ankara	Agrivoltaik Sistemler: Nedir, Nasıl Tasarlanır ve Hangi Tarımsal Ürünlerle Uyumludur?
16.30-17.00	Davetli Konuşmacı		
	Eralp ÖZİL	CEO, ZETA Bilgi Teknolojileri	Manheim Protokolünün Türkiye için Düşündürdükleri
17.00-17.30	Davetli Konuşmacı		
	Ece ÖZDEMİROĞLU	İcra Kurulu Başkanı, Çevre için Ekonomi (EFTEC), İngiltere	İklim Değişikliği Politika ve Kanunları - İngiltere ve Türkiye
17.30-18.00	Davetli Konuşmacı		
	José ETCHEVERRY	Uluslararası Yenilenebilir Enerji Akademisi Direktörü, Çevre Bilimleri Fakültesi York Üniversitesi Ontario, Kanada	Kuzey Amerika'da %100 Yenilenebilir Enerji Hedefine Ulaşma Yolunda Kısa Bir Güncelleme

15. ULUSLARARASI %100 YENİLENEBİLİR ENERJİ KONFERANSI

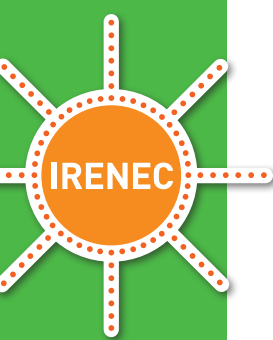
IRENEC 2025 PROGRAM

15 May 2025 Thursday

09.00 - 10.15	Renewable Energy Associations Session		
Moderator	Tanay Sıdkı UYAR	Chairman, Renewable Energy Association EUROSOLAR Türkiye	
Speakers	Alper KALAYCI	Chairman, Energy Industrialists and Business People Association (ENSIA), Türkiye	Türkiye's Clean Energy Outlook
	Haluk SAYAR	Chairman, Eurasia E-Mobility Association (AVERE Türkiye) and E-Mobility Europe Association Board Member	The E-Mobility Revolution in Eurasia: 2025 and Beyond
	Murat DURAK	Chairman, Offshore Wind Energy Association (DÜREB), Türkiye	Offshore Wind Energy: Opportunities for Türkiye
10.15 - 10.30	Break		
10.30 - 11.00	Invited Speaker		
	Christian RAKOS	President, World Bioenergy Association (WBA), Stockholm, Sweden	The Role of Bioenergy in the Transition to a Renewable Energy System
11.00 - 12.30	Industry and Energy Transition		
Moderator	Oğuzhan HAZNEDAR	Treasurer Board Member, Renewable Energy Association EUROSOLAR Türkiye	
Speakers	Oğuzhan HAZNEDAR	General Manager, Şule Enerji A.Ş. , Türkiye	The European Union Carbon Border Adjustment Mechanism (CBAM) and the Adaptation Process of Turkish Industry
	Mehmet Akif ARDIÇ	Sales Manager, Kıvanç Enerji Üretim A.Ş. , Türkiye	Global Developments in Solar Energy Production and the Turkish Market
	Serkan ÖZCAN	General Manager, Chiron Group, Türkiye	Performance Meets Precision
	İsmail YAVUZ	Service Operation Manager, VESTAS, Türkiye	VESTAS Service Solutions: Shaping the Future of Wind Energy with Innovative Approaches
	Ender Nur	Director of Energy Trading, Rönesans Holding, Türkiye	Electricity Trading and Aggregation in the Turkish Market
12.30 - 13.00	Invited Speaker		
	Hasan HEPERKAN	Lecturer, İstanbul Nişantaşı University Faculty of Engineering, Türkiye	The Impact of the European Green Deal on Energy Efficient Use of Energy in Buildings and System Design
13.00 - 13.30	Break		
13.30 - 14.15	Plenary Speaker		
	İbrahim DİNÇER	Ontario Tech. University, Kanada, Yıldız Technical University, Türkiye, President of National Hydrogen Energy Association, President of TÜBA-Energy Working Group	Green Hydrogen for a Sustainable Future
14.15 - 14.45	Water Energy Food Ecosystem WEFE Nexus, Farming of the Future: The Frontier Agriculture Taşarısı Village Project		
	Tanay Sıdkı UYAR	President, Renewable Energy Association EUROSOLAR Türkiye	Water Energy Food Ecosystem WEFE Nexus, Farming of the Future: The Frontier Agriculture Taşarısı Village Project
14.45 - 15.00	Break		
15.00 - 16.00	The Role of Municipal Councils and Mayors in the Climate Actions Required for Cities to Become Climate Neutral by 2030		
Moderator	Tanay Sıdkı UYAR	President, Renewable Energy Association EUROSOLAR Türkiye	
Speakers	Abdül TAŞYASAN	Mayor, Saray Municipality, Tekirdağ, Türkiye	Saray's Green Future: From Local Action to Climate Neutrality
	Bekdemir İŞBİLİR	Vice President, Amasya Municipality, Türkiye	Amasya Municipality's Sustainability Vision: Environmentally Friendly Social Municipalism Integrated with Culture and Arts
	Erkan ERGÜL	Chair of the Sustainability Commission of Merzifon Municipal Council – Municipal Council Member, Türkiye	The Role of the Municipal Council and the Mayor in Merzifon's Goal of Achieving Climate Neutrality by 203
16.00 - 16.30	Invited Speaker		
	Talat ÖZDEN	Unit Coordinator, Module Technologies, ODTÜ GÜNAM, Ankara	Agrivoltaic Systems: What Are They, How Are They Designed, and Which Agricultural Crops Are They Compatible With?
16.30-17.00	Invited Speaker		
	Eralp ÖZİL	CEO, Zeta ZETA Information Technologies	What the Mannheim Protocol Makes Us Think About Türkiye
17.00-17.30	Invited Speaker		
	Ece ÖZDEMİROĞLU	Chief Executive Officer, Economy for the Environment (EFTEC)	Climate Change Policies and Laws – The United Kingdom and Türkiye
17.30-18.00	Invited Speaker		
	José ETCHEVERRY	Director of the International Academy for Renewable Energy	A Brief Update on the Path Toward Achieving 100% Renewable Energy in North America



15th INTERNATIONAL 100% RENEWABLE ENERGY CONFERENCE



IRENEC 2025 PROGRAMI

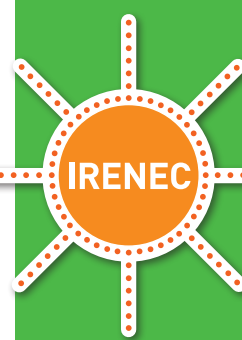
16 Mayıs 2025 Cuma

09.00 - 10.30	Enerji Modelleme Uygulamaları ve Sanayide Enerji Verimliliği		
Moderatör	Egemen SULUKAN	İstanbul Gedik Üniversitesi, Makine Mühendisliği Öğretim Üyesi	
Konuşmacılar	Egemen SULUKAN	İstanbul Gedik Üniversitesi, Makine Mühendisliği Öğretim Üyesi	İstanbul Boğazı'nda Sürdürülebilir Deniz Yolcu Taşımacılığı: Bir Senaryo Analizi
	Ceren AYDIN	İstanbul Gedik Üniversitesi, Türkiye	Gedik Meslek Yüksekokulu'nun Enerji Dönüşüm Planlaması için Referans Enerji Sisteminin Modellenmesi
	Ferit ARTKIN	Kocaeli Üniversitesi, Türkiye	Hereke Asım Kocabıyık Meslek Yüksekokulu Enerji Sisteminin Analizi ve Referans Enerji Sisteminin Geliştirilmesi
	Doruk GÜRKAN	İstanbul Gedik Üniversitesi, Türkiye	Sürdürülebilir ve Enerji Verimli Uygulamalar için ZnO Kaplamaların Geliştirilmesi ve Karakterizasyonu
10.30 - 12.00	Konferans Sunumları 1. Oturum		
Moderatör	Enver ŞAT	Başkan Yardımcısı, Yenilenebilir Enerji Birliği EUROSOLAR Türkiye	
Konuşmacılar	Yusuf İslam YAVUZ	Makine Mühendisi, Yenilenebilir Enerji Birliği EUROSOLAR Türkiye	Tarladan Sofraya Yeşil Geçiş: Avrupa Yeşil Mutabakatı ve WEFE Nexus Yaklaşımıyla Sürdürülebilir Gıda Sistemleri
	Ahmet NAYİR	Beykent Üniversitesi Mühendislik-Mimarlık Fakültesi Elektrik-Elektronik Mühendisliği Bölümü Öğretim Üyesi	Birleşmiş Milletler 2030 Sürdürülebilir Kalkınma Amaçlarının Sürdürülebilirlik ve İklim Değişikliği Ders Müfredatına Yansımaları
	Cem ÇELİK	Marmara Üniversitesi, Türkiye	Bir Türk Denizcilik İnşaat Şirketinin Sürdürülebilirlik Yaklaşımı Üzerinde SWOT Analizinin Etkisi
	Özlem YURTSEVER	Marmara Üniversitesi, Türkiye	Sürdürülebilirlik Raporlamasında SWOT Analizinden Yararlanmak: Çift Yönlü Önemlilik Perspektifi
12.00 - 12.30	Ara		
12.30 - 14.00	Konferans Sunumları 2. Oturum		
Moderatör	Ahmet Özer KALİBER	Yönetim Kurulu Üyesi, Yenilenebilir Enerji Birliği EUROSOLAR Türkiye	
Konuşmacılar	Egemen GENÇOĞLU	Meteoroloji Genel Müdürlüğü, Türkiye	İğdir İlinde Evsel Katı Atıklardan Enerji Üretimi
	Barış NAMLI	İstanbul Teknik Üniversitesi, Mühendislik Fakültesi, Türkiye	Tsunami Kuyruk Akıntısı ve Birleşik Aerodinamik Etkilere Maruz Kalan 5 MW NREL Rüzgar Türbininin Yapısal Analizi
	Nuri Erkin ÖÇER	Orta Doğu Teknik Üniversitesi Havacılık ve Uzay Mühendisliği Bölümü, Türkiye	WRF Simülasyonları ile Ege Denizi Üzerindeki Rüzgar Tahmininin Değerlendirilmesi
	Ecem Zeynep ÖZTÜRK	TOBB Ekonomi ve Teknoloji Üniversitesi, Türkiye	"COMSOL Multiphysics" Analizi ile Kompozit Yapılı Rüzgar Türbini Kanadının Modellemesi
14.00 - 14.15	Ara		
14.15 - 15.45	Sarıgerme Çalışma Grubu Çalıştaylarından 15. Uluslararası %100 Yenilenebilir Enerji Konferansına		
15.45 - 17.15	Konferans Sunumları 3. Oturum		
Moderatör	Moaz BİLTO	Makine Mühendisi, Texas Üniversitesi, Dallas, ABD	
Konuşmacılar	Moaz BİLTO	Makine Mühendisi, Texas Üniversitesi, Dallas, ABD	Sürdürülebilir Bir Enerji Taşıyıcısı Olarak Hidrojen: Teknolojik ve Ekonomik Zorlukların Kapsamlı Bir İncelemesi
	Murat ÇETİN	Öğretim Görevlisi, İstanbul Üniversitesi, Türkiye	Çok Hızlı, Çok Geç mi? Yenilenebilir Enerjiye Hızlı Geçiş İklim Eylemini Nasıl Engellerebilir?
	Daiva MATONIENE	Merkezi Proje Yönetim Ajansı (CPMA), Litvanya	Sürdürülebilir Enerji ve İklim Eylem Planlarından (SECAP'lar) Uygulamaya: Türkiye'de Yerel İklim Liderliği
	Sara Ghaboulia ZARE	Montreal Üniversitesi, Kanada	C40 şehirlerinin 2050 yılına kadar karbonsuzlaştırılması için H2'nin B-U enerji modellerine entegrasyonu: Montréal Metropol Topluluğu için bir ETEM uygulaması
	Syed Ali Mashood NAQVI	Yüksek Lisans Öğrencisi, Yenilenebilir Enerji Yönetimi, Technische Hochschule Köln, Almanya	Tüketici-Üretici Hanelerde Optimal Enerji Temini: Karşılaştırmalı Bir Analiz
17.15 - 18.00	Kapanış Oturumu – IRENEC 2025'in Değerlendirmesi ve IRENEC 2026'nın Planlanması		
Moderatör	Tanay Sıdkı UYAR	Başkan, EUROSOLAR Türkiye	
	Alper SAYDAM	Makine Mühendisi, IRENEC Bilim Komitesi Üyesi	
	Doğanca BEŞİKÇİ	Genel Sekreter, EUROSOLAR Türkiye	

IRENEC 2025 PROGRAM

16 May 2025 Friday

09.00 - 10.30	Energy Modeling Applications and Energy Efficiency in Industry		
Moderator	Egemen SULUKAN	Istanbul Gedik University, Department of Mechanical Engineering Faculty Member	
Speakers	Egemen SULUKAN	Istanbul Gedik University, Department of Mechanical Engineering Faculty Member	Sustainable Maritime Passenger Transport in Istanbul Strait: A Scenario Analysis
	Ceren AYDIN	Istanbul Gedik University, Türkiye	Modeling the Reference Energy System of Gedik Vocational School for Energy Transition Planning
	Ferit ARTKIN	Kocaeli University, Türkiye	Analysis of Hereke Asım Kocabıyık Vocational School Energy System and Development of Reference Energy System
	Doruk GÜRKAN	Istanbul Gedik University, Türkiye	Development and Characterization of ZnO Coatings for Sustainable and Energy Efficient Applications
10.30 - 12.00	Conference Presentations Session 1		
Moderator	Enver ŞAT	Vice President, Renewable Energy Association EUROSOLAR Türkiye	
Speakers	Yusuf İslam YAVUZ	Mechanical Engineer, Renewable Energy Association EUROSOLAR Türkiye	Green Transition from Farm to Table: The European Green Deal and the WEFE Nexus Approach Sustainable Food Systems
	Ahmet NAYİR	Faculty Member, Department of Electrical and Electronics Engineering, Faculty of Engineering and Architecture, Beykent University	Reflections of the United Nations 2030 Sustainable Development Goals on the Sustainability and Climate Change Course Curriculum
	Cem ÇELİK	Marmara University, Türkiye	The Effect of SWOT Analysis on the Sustainability Approach of a Leading Turkish Maritime Construction Company
	Özlem YURTSEVER	Marmara University, Türkiye	Leveraging SWOT Analysis in Sustainability Reporting: A Double Materiality Perspective
12.00 - 12.30	Break		
12.30 - 14.00	Conference Presentations Session 2		
Moderator	Ahmet Özer KALİBER	Board Member, Renewable Energy Association EUROSOLAR Türkiye	
Speakers	Egemen GENÇOĞLU	General Directorate of Meteorology, Türkiye	Energy Production from Municipal Solid Waste in Iğdır Province
	Barış NAMLI	Istanbul Technical University, Faculty of Engineering, Türkiye	Structural Analysis of a 5 MW NREL Wind Turbine Exposed to Tsunami Wake and Combined Aerodynamic Forcing
	Nuri Erkin ÖÇER	Middle East Technical University, Department of Aerospace Engineering, Türkiye	Assessment of Wind Forecasting over the Aegean Sea with WRF Simulations
	Ecem Zeynep ÖZTÜRK	TOBB University of Economics and Technology, Türkiye	Modeling of a Composite-Structured Wind Turbine Blade Using COMSOL Multiphysics Analysis
14.00 - 14.15	Break		
14.15 - 15.45	From the Sarıgerme Working Group Workshops to the 15th International 100% Renewable Energy Conference		
15.45 - 17.15	Conference Presentations Session 3		
Moderator	Moaz BİLTO	Mechanical Engineer, The University of Texas at Dallas, USA	
Speakers	Moaz BİLTO	Mechanical Engineer, The University of Texas at Dallas, USA	Hydrogen as a Sustainable Energy Carrier: A Comprehensive Review of Technological and Economic Challenges
	Murat ÇETİN	Faculty Member, İstanbul University, Türkiye	Too Fast, Too Late? How a Rapid Transition to Renewable Energy Could Hinder Climate Action
	Daiva MATONIENE	Central Project Management Agency (CPMA), Lithuania	From Sustainable Energy and Climate Action Plans (SECAPs) to Action: Local Climate Leadership in Türkiye
	Sara Ghaboulia Zare	Montreal University, Canada	Integrating H2 into B-U energy models for decarbonizing C40 cities by 2050: An application of ETEM for the Montréal Metropolitan Community
	Syed Ali Mashood NAQVI	Master's Student, Renewable Energy Management, Technische Hochschule Cologne, Germany	Optimal Energy Provision in Prosumer Households: A Comparative Analysis
17.15 - 18.00	Closing Session – Evaluation of IRENEC 2025 and Planning of IRENEC 2026		
Moderator	Tanay Sıdkı UYAR	President, EUROSOLAR Türkiye	
	Alper SAYDAM	Mechanical Engineer, IRENEC Science Committee Member	
	Doğanca BEŞİKÇİ	Secretary General, EUROSOLAR Türkiye	



15. ULUSLARARASI %100 YENİLENEBİLİR ENERJİ KONFERANSI

15th INTERNATIONAL 100% RENEWABLE ENERGY CONFERENCE

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Alper Saydam
Doğancan Beşikçi
Tanay Sıdkı Uyar
Yusuf İslam Yavuz

Yerel Organizasyon Komitesi (Yönetim) / Local Organizing Committee (Administrative)

Tanay Sıdkı Uyar; Administrative Manager
Serdar Tan; Graphic Designer

A New Era in Turkish Wind: Growth, Investment and Global Competitiveness

İBRAHİM ERDEN

This session will provide a comprehensive overview of Türkiye's wind energy sector, focusing on its growth potential, industrial capacity, financing dynamics, and role in global competitiveness. It will address the implications of escalating trade and tariff tensions between the U.S. and China, the evolving global supply chains, industrial competitiveness, and Europe's strategic positioning. The presentation will also highlight Türkiye's ambitions to expand local manufacturing, attract international investment, and realize large-scale renewable energy projects in this new era.

From Past to Future: Solar Energy in Türkiye

HAKAN ERKAN

Türkiye's Sun is Rising: National Strategies and GÜNDER's Roadmap

MEHMET NAZIM YAVUZ

Energy Indepence with our Infinite and Sustainable Resource Geothermal

ALİ KİNDAP

Türkiye ranks first in Europe and fourth in the world in geothermal energy potential. Türkiye holds strong potential to contribute to local and sustainable development with its high capacity to utilize its geothermal resources in a multiple areas.

Despite this solid potential, the use of geothermal resources is generally limited to electricity generation. However, geothermal energy is a sustainable source that can be used directly and indirectly across various sectors such as district heating and cooling, greenhouse cultivation, industrial drying, aquaculture, spa tourism, and mineral extraction.

The Geothermal Energy Association of Türkiye (JED) works with an integrated approach that encompasses environmental, economic, and social dimensions in order to strengthen the sector's knowledge base and raise public awareness through accurate and reliable information.

The panel will address how Türkiye can better leverage its geothermal potential to support sustainable development. Topics will include effective regulations, environmental impacts, the role of geothermal in combating climate change, advanced geothermal systems, new technologies, and strategic steps forward.

Machine Learning Algorithms to Improve Electrical Power Grids for a Carbon Free Energy Supply

EBERHARD WAFFENSCHMIDT

In the near future electrical power grids need to supply a number of additional loads and decentralized generated renewable power. This requires an increased effort to control and supervise those dispatchable loads and components. Machine learning algorithms like neural networks can help significantly in these tasks. Examples, which will be presented, are predicting grid states with a drastically reduced effort of measurement equipment, analysing huge amount of measurements for irregularities or locating origins for disturbances in a power grid. Neural networks, which include and consider physical information, are especially well suited for such tasks.

THOMAS OSDOBA

Engineering and Project Management in Wind Power Plant Projects

ERDEM ÜNCÜ

Sustainable Finance and Green Transformation with Renewable Energy Investments

SERAY İMER

Green Transition

SEÇİL KIZILKAYA YILDIZ

2025: Direction of the Race in Direct Conversion of Solar Energy into Electrical Energy Technologies

ŞENER OKTİK

In the Global Net Zero Scenario, the investment target for low-carbon energy technologies in 2024 was \$5.6 trillion USD, while the realized investment remained at \$2.1 trillion USD. To comply with the net-zero objective, annual investments of \$5.6 trillion USD between 2025 and 2030, \$7.6 trillion USD between 2031 and 2035, and \$7.8 trillion USD between 2036 and 2050 are required. In 2024, within renewable energy technologies, \$503 billion USD was invested in the photovoltaic (PV) sector and \$426 billion USD in wind energy, totaling \$929 billion USD. That year, newly installed solar power plant capacity reached 600 GWp globally—334 GWp in China and 256 GWp in other countries—bringing the world's total PV capacity to 2,217 GWp.

As we approach 2050 and its net-zero carbon goals, the projected acceleration in PV power plant installations is fueling global competition across every link of the PV value chain. Technologies based on crystalline silicon wafers dominate 95% of the PV market; by 2023, 99% of PV cells were manufactured using monocrystalline silicon wafers. The evolution of PV cell technologies has progressed from Al-BSF to PERC, PERT, TOPCon, HJT, IBC, HBC, MWT, and TBC. As of 2024, PERC cells have reached ~23% efficiency with around 40% market share; TOPCon has surpassed 26% efficiency and achieved 49% market share, becoming the industry leader. HJT cells have approached 27% efficiency but remain limited to an 8% market share due to production challenges. High-efficiency alternatives like IBC are also entering the competitive landscape.

This presentation will discuss the direction of global competition in photovoltaic electricity generation technologies based on the latest 2025 data.

Merzifon Municipality's Declaration of Commitment to UN Sustainability Goals, IPCC Carbon Emissions and Kummings – Montreal Biodiversity Protocol

ERALP ÖZİL, ÖZLEM YURTSEVER,
SERCAN KIRIK (Presenting), CEM ÇELİK
MARMARA

The Mannheim Declaration sets out local efforts to ensure the city's commitment to a sustainable future through citizen participation, aligning it with the UN's 17 Sustainable Development Goals (SDGs). Adopting a philosophy of "Think Globally, Act Locally," Mannheim has developed the "Mannheim 2030" Mission Statement through extensive public participation, declaring how the city plans to live sustainably while meeting its responsibilities.

This article compares Mannheim's comprehensive model with the current situation in Türkiye, where local municipalities lag significantly behind in sustainability reporting, reducing their carbon footprint, and protecting biodiversity, despite national commitments such as the 2053 carbon neutrality target.

Advocating for more robust local approaches for developing countries, the study highlights the need for initiatives such as the proposed "Merzifon Declaration." This statement is intended to evolve into a more comprehensive model, providing a framework for translating global goals into concrete local action and accountability by clearly planning Sustainability Reports (in line with GRI/CSRD), Carbon Footprint calculations and emission reductions (until 2035), and Biodiversity actions (in line with the Kunming-Montreal Protocol).

Sustainable Development with Local Solutions; Saray Municipality's Environmentally Friendly Projects

Presenting BERKER ELBELİ, HÜLYA ECEVİT,
TANAY SIDKI UYAR

While major problems such as environmental pollution, climate change and depletion of natural resources are increasing worldwide, local governments are looking for various innovative solutions to combat these problems. Saray Municipality, with the importance it attaches to environmentally friendly projects, aims to provide effective solutions to these global problems on a local basis and aims to inspire other municipalities by discussing how local governments can create a cleaner and livable environment with sustainable energy and environmental projects.

As Saray Municipality, we participate in all calls to support the natural texture of our district, each of which has different categories, but the general title is sustainable energy. In this context, our biggest step was to participate in the Net Zero Cities Program in line with the goal of becoming climate-neutral by 2050 and to obtain approval from the Saray Municipality Council in this direction. We applied to the Ministry of Environment and Urbanization's EU-Türkiye Climate Change Grant Program (EU-TR CCGP) call with the idea of "Developing an Action Plan for Climate Neutrality in Saray". With this project, we aim to obtain high quality fertilizer from organic waste in our district and support sustainable agriculture.

We participated in the İMERMAID 2 Project Call, the theme of which is water and ocean cleanliness, with the project "Improving the Water Quality of Ergene River in Saray District". Our motivation in this project was to improve the water quality of the Ergene River, which originates from our geography, to protect biodiversity and restore the ecosystem in the region.

We applied to the fourth call of the Streets are Transforming Program organized by the Union of Marmara Municipalities, which is the largest management network of our institution in the region, and we were accepted. Saray Municipality's pedestrianization of the street around a school block is an important urban intervention that prioritizes the safety of children and families, as well as supporting sustainable transportation in our district, reducing vehicle traffic in the region and improving local air quality.

Climate Action and Energy Transition in Local Governments: Sustainability Strategies of Amasya Municipality

CEYDA KAZANCIOĞLU KAYNAR

Energy Modelling Hub (EMH), Montreal
EDOUARD CLEMENT

This presentation will introduce the Energy Modelling Hub (EMH), a pan-Canadian initiative that plays a central role in enabling evidence-based policymaking for Canada's energy transition. EMH brings together modellers, policymakers, and diverse stakeholders to strengthen decision-making through collaborative dialogue, open-source modelling tools, and targeted capacity building. As energy systems grow more complex, so does the need for credible data, transparent assumptions, and shared analytical capacity. EMH addresses these challenges through an integrated approach: convening cross-sector actors, supporting best practices, and enhancing model accessibility and use. With strong backing from government agencies and research institutions, EMH is emerging as a critical convener and enabler for Canada's net-zero future.

Role and Achievements of IRENA IITC in the Global Energy Transition
SAIED DARDOUR**Hydrogen in the Global Energy Landscape: Insights from Integrated Assessment Modeling****OLIVIER BAHN**

As the world navigates the urgent need for a global energy transition, hydrogen emerges as a promising vector for achieving deep decarbonization. Evaluating the potential of a hydrogen economy requires a holistic perspective—one that captures the complex interplay between energy systems, land use, economic activity, and their associated greenhouse gas emissions. Integrated Assessment Models (IAMs) provide such a framework, combining insights across sectors to assess pathways toward climate goals.

This presentation provides a comprehensive survey of 12 integrated assessment model (IAM) families, synthesizing findings from 50 studies to evaluate hydrogen's role across a broad set of scenarios featured in the IPCC Sixth Assessment Report (Working Group III). The analysis highlights hydrogen's increasing importance, particularly in scenarios aligned with stringent climate mitigation targets. Moreover, the findings underscore that the extent to which hydrogen is deployed varies significantly across models, reflecting differences in structural assumptions, technology representation, and regional detail—emphasizing the critical influence of model design on projected energy futures.

In addition, we highlight ongoing developments at GERAD to expand our in-house IAM, AD-MERGE, through the launch of AD-MERGE-2.0. This updated version builds on its predecessor by incorporating improved geographic disaggregation—with six additional regions—enhanced technology representation, and updated assessments of climate damages and adaptation. Notably, it introduces a richer set of energy technologies, with particular emphasis on variable renewable energy systems and their integration. These advancements aim to improve the representation of hydrogen production pathways and deepen our understanding of its role in long-term decarbonization strategies.

IRENEC

Türkiye's Clean Energy Outlook
ALPER KALAYCI**E-Mobility Revolution in Eurasia: 2025 and Beyond**
HALUK SAYAR

Over the past decade, electric vehicles (EVs) have transformed global mobility, becoming a central pillar of sustainable transportation. In 2014, there were only 300,000 EVs worldwide; by 2024, annual sales reached 17 million, with Eurasian countries such as Germany and China leading the way in this revolution.

At the heart of Eurasia, Türkiye has seen its EV stock surpass 185,000 in 2024, with more than 105,000 annual sales, accounting for 10.7% of the total vehicle market. With 26,046 public charging sockets—10,332 of which are fast chargers (DC)—Türkiye has risen to the top in terms of charging infrastructure across Europe.

The impact of domestically produced EVs, increasing interest from Chinese manufacturers (e.g., BYD, Chery), and the national goal of 500,000 EVs by 2030 have further accelerated Türkiye's growth in this field.

In parallel, the widespread development of charging stations, autonomous driving technologies, and battery recycling processes—combined with energy management systems and digital supply chains—are paving the way for entirely new business models.

Today, the center of gravity of the global economy is no longer located in the Atlantic but has shifted eastward—towards Eurasia. With dynamic populations and rapidly evolving economies, Eurasian countries are expected to lead the next wave of the e-mobility revolution through and beyond 2025.

IRENEC

As of January 2025, 13 GW of Türkiye's 115 GW Installed Power Capacity Comes from Wind Energy
MURAT DURAK

In a period when the "Blue Homeland" strategy is frequently discussed, the idea that our seas should be more actively utilized in all sectors has become increasingly accepted. "Blue Homeland" should not be confined solely to military strategies; instead, concrete and planned steps must also be taken in other areas—especially in energy. While there have been major efforts to explore fossil fuel reserves in Türkiye's seas, offshore wind energy investments are expected to be added in the coming period. The need to benefit more from our seas is now an undeniable fact. These efforts and experiences will be realized through the correct and timely development of offshore wind energy investments as a vital component of the energy transition.

Offshore wind projects should be evaluated not only as contributors to renewable energy and energy security but also from a strategic perspective. Onshore wind farms have economically revitalized Türkiye's remote and mountainous areas; a similar opportunity now exists for maritime zones. Beyond utilizing the seabed, we now have the potential to benefit from the sea surface. Moreover, the components of these projects—equipment, vessels, logistics, engineering, and installation—should be produced locally. This would allow Türkiye to export its know-how and workforce to neighboring countries.

Key priorities:

- OWPs should be seen as strategic assets, not merely energy projects.
- All project components should be localized.
- A roadmap must be prepared for industrial development.
- Marine Spatial Planning should be established.
- Financing structures must be clarified.

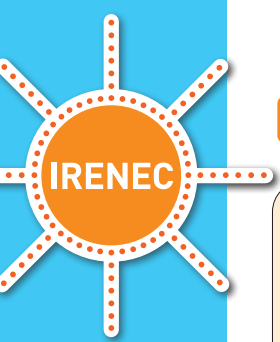
According to Türkiye's 2020–2035 National Energy Plan:

- Primary energy consumption is projected to reach 205.3 Mtoe,
- Electricity consumption will rise to 510.4 TWh,
- Installed capacity will reach 189.7 GW,
- Wind energy will grow to 29.6 GW (5 GW offshore),
- Solar energy will reach 52.9 GW,
- New capacity to be commissioned: 96.9 GW,
- Renewables in electricity production: 54.7%,
- Renewables in total installed capacity: 64.7%.

Out of the 29.6 GW allocated for wind, 5 GW is targeted for offshore wind power.

The Role of Bioenergy in the Transition to a Renewable Energy System
CHRISTIAN RAKOS

The presentation will discuss the contributions bioenergy will need to make to arrive at a carbon neutral energy system. It will discuss the current state of development and issues that will need to be solved to increase bioenergy contribution in energy supply systems.



15 MAY 2025

ABSTRACTS

The European Union Carbon Border Adjustment Mechanism (CBAM) and the Adaptation Process of Turkish Industry

OĞUZHAN HAZNEDAR

Global Developments and Turkish Market On Solar Energy Production

MEHMET AKİF ARDIÇ

- Developments in solar energy production in China, the USA and Europe.
- Driving Forces, Constraints and Expectations in Solar Energy Investments in Türkiye.
- Overview of Kivanc Group, Kivanc Enerji, and Kivanc Solar Panel Manufacturing Facility.

Performance Meets Precision

SERKAN ÖZCAN

Vestas Service Solutions: Shaping the Future of Wind Energy Through Innovative Approaches

İSMAİL YAVUZ

While the wind energy sector plays a critical role in a sustainable future, operational efficiency and technological adaptation form the foundation of success in this field. This presentation will explore the evolution of Vestas' globally developed service solutions, how they reinforce the company's leadership in the industry, and how innovative strategies are meeting customer demands.

Vestas' current service structure aims to extend turbine life and maximize energy production through a spectrum ranging from proactive maintenance models to intelligent data analytics. Attendees will learn how the company minimizes downtime using IoT-based monitoring systems, AI-powered predictive maintenance, and digital solutions. The presentation will also highlight how service packages such as Vestas Performance Plus enhance energy efficiency and how customer-focused, flexible contract models help balance risk sharing.

The session will further address Vestas' decarbonization goals for its service operations in alignment with its sustainability commitments, and its "glocal" approach that combines local teams with global expertise. Finally, the impact of digital transformation and energy storage integration trends on Vestas' future strategies will be discussed.

This presentation aims to offer attendees a valuable perspective on how Vestas' service solutions optimize the lifespan of wind farms, reduce operational costs, and minimize environmental impact—backed by concrete examples from the field.

Electricity Trading and Aggregation in the Turkish Market

ENDER NUR

The liberalization process of the Turkish electricity market and the rise of innovative business models have brought electricity trading and aggregation into focus. This presentation will provide a general overview of the current structure of electricity trading in Türkiye, the role of aggregators in the market, and the potential opportunities they offer for the energy sector.

The Impact of the European Green Deal on System Design and Effective Use of Energy in Buildings

HASAN A. HEPERKAN

Energy is one of the important inputs that play a role in the social and economic development of societies. Fossil fuel reserves are decreasing. The concentration of greenhouse gases in the atmosphere is reaching dangerous levels for human well-being. Clean energy production and efficient use of energy are among the most crucial issues of our day.

A protocol was organized in Kyoto, Japan, on December 11, 1997 to limit greenhouse gases. In December 2015, the Paris Agreement reached a universal consensus to strengthen global climate action by keeping the global temperature increase in this century well below 2°C compared to pre-industrial levels. Success in the transition to a carbon-neutral society can be achieved by carefully managing a series of changes. Such transitions that will lead the world to a green future require not only energy and the environment, but also the inclusion of economic and social areas in the process. The European Union has determined its direction on this issue with two vision documents; the Energy Roadmap 2050 and the European Green Deal.

The recently revised 2018 Energy Performance of Buildings Directive (EPBD) is an important component of the strategy to achieve a zero-emission and completely carbon-neutral building stock by 2050. It emphasizes the importance of improving the quality of life, health and work performance of building occupants. Comfort and health are also included in the "Smartness Readiness Indicator (SRI)". The revised directive facilitates targeted financing for investments in the construction sector.

In modern economies, it is difficult to do business without ICT, information and communication technology and internet connectivity. More and more devices include communication modules that connect them to the internet or a similar network. These products are called IoT (Internet of Things), which is a network of interconnected cyber-physical objects. Digitalization is the widespread use of ICT, information and communication technologies (ICT), especially smart devices and sensors, and the innovative use of big data collection and analysis. Digital Control Systems (DDC) and BIM technologies are also used in smart building applications. These technologies are very useful in the design, operation, control, management and monitoring of air-conditioning and mechanical systems of smart buildings.

Energy Demand in the Middle East and North Africa (MENA) is expected to increase by 50% by 2040, and countries are facing a range of climate change-related challenges. The region's energy challenges include rapidly growing populations, urbanization and a severely deteriorated energy infrastructure. An additional climate impact comes from the refrigerants still used in many air conditioners and refrigerators, which have a high global warming potential, 2,000 times more than carbon dioxide and natural refrigerant alternatives. The topics will be discussed together with case studies

ABSTRACTS

15 MAY 2025

Renewable Hydrogen for Sustainable Future

İBRAHİM DİNÇER

Water Energy Food Ecosystem WEFE Nexus, Farming of the Future: The Frontier Agriculture Taşarası Village Project

TANAY SİDKİ UYAR

Saray's Green Future: From Local Action to Climate Neutrality

ABDÜL TAŞYASAN

Amasya Municipality's Sustainability Vision: Environmentally Friendly Social Municipalism Integrated with Culture and Art

BEKDEMİR İŞBİLİR

The Role of the Municipal Council and the Mayor in Merzifon's Goal of Achieving Climate Neutrality by 2030

ERKAN ERGÜL

Achieving climate neutrality by 2030 requires strong leadership from local governments. Mayors play a key role in shaping strategic vision, mobilizing public support, and allocating resources, while municipal councils are crucial in establishing legal frameworks, ensuring oversight, and fostering public participation. Climate action plans, support for renewable energy projects, and the adoption of sustainable mobility policies can only be implemented through the effective collaboration of these actors. Furthermore, local leaders working in alignment with central governments can accelerate climate investments by improving access to financial resources. Therefore, mayors and municipal council members must lead the way as both policymakers and agents of societal transformation in the journey toward climate neutrality.

In this context, the Municipality of Merzifon has prepared its carbon footprint and sustainability report, implemented the Kunming-Montreal Biodiversity Protocol, and established the Municipal Sustainability Commission to ensure well-structured planning.

Agrivoltaic Systems: What Are They, How Are They Designed, and Which Agricultural Crops Are They Compatible With?

TALAT ÖZDEN

What the Mannheim Protocol Makes Us Think About Türkiye

ERALP ÖZİL

Climate Change Policies and Laws – The United Kingdom and Türkiye

ECE ÖZDEMİRÖĞLU

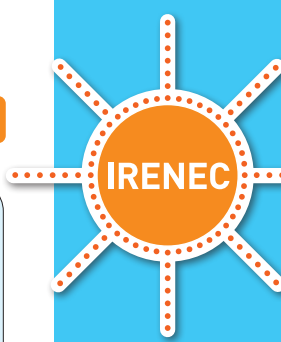
A Brief Update on the Road to Achieving 100% Renewable Energy in North America

JOSÉ ETCHEVERRY

Canada, Mexico, and the United States have recently held national elections, and the outcomes of these democratic processes are fundamentally reshaping the path toward achieving the 100% renewable energy target in North America.

In this presentation, our team will provide an overview of the recent geopolitical changes and offer an assessment of the road ahead and its implications on a planetary scale.

IRENEC

15th INTERNATIONAL 100% RENEWABLE ENERGY CONFERENCE

15. ULUSLARARASI %100 YENİLENEBİLİR ENERJİ KONFERANSI

Sustainable Maritime Passenger Transport in Istanbul Strait: A Scenario Analysis

EGEMEN SULUKAN

This study analyzes the energy consumption and emissions of maritime passenger transport in Istanbul, focusing on the Kadıköy–Eminönü route. The Low Emissions Analysis Platform (LEAP) was employed to construct a reference energy system and to develop an alternative scenario assessing the potential impact of electrification. Furthermore, the feasibility of using LPG as a cleaner fuel alternative is explored, in response to tightening emission regulations from the International Maritime Organization (IMO).

The Istanbul Strait is a vital waterway facing growing environmental pressures due to increasing maritime traffic and population density. There is growing interest in electric ferries for short-distance transport, as they reduce emissions and noise while improving passenger comfort.

The LEAP model is used to evaluate energy consumption and emissions, with mathematical formulas applied to calculate total emissions, energy use, carbon footprint, emission reduction, and emission intensity. A reference energy system was developed for a typical passenger ferry operating on the Kadıköy–Eminönü route, identifying the main propulsion system as the dominant energy consumer.

Modeling the Reference Energy System of Gedik Vocational School for Energy Transition Planning

CEREN AYDIN (Presenting), EGEMEN SULUKAN, TANAY SIDKI UYAR

In a previous study, the existing energy infrastructure of Gedik Vocational School (MYO) was analyzed using the Reference Energy System (RES) approach, in which energy flows, transformation technologies, and final energy carriers were examined schematically. Building upon this foundation, the current study advances the analysis by developing a RES-based model of Gedik MYO's energy system.

Within the scope of this modeling effort, energy supply and demand processes are simulated in detail, and the current system's performance is quantitatively assessed through scenario analysis. Additionally, various scenarios are explored, including the integration of renewable energy sources, energy efficiency strategies, and system optimization approaches. The model aims not only to assess the present system but also to identify opportunities for improvement in terms of sustainability, efficiency, and cost-effectiveness.

This study ultimately seeks to develop a sustainable and efficient energy management plan for Gedik MYO. The findings aim to contribute concretely to the institution's energy transition efforts and to offer a replicable model for other educational institutions of similar scale.

Analysis Of Hereke Asım Kocabıyık Vocational School Energy System And Development Of Reference Energy System

FERİT ARTKIN (Presenting), EGEMEN SULUKAN, TANAY SIDKI UYAR

This research will endeavor to develop a digital twin of the energy model, which will include the Reference Energy System (RES), energy flows, conversion technologies, and final energy carriers of the current energy infrastructure of Hereke Asım Kocabıyık Vocational School, which is affiliated with Kocaeli University. The technological, economic, and environmental implications of the parameters will be investigated. In this study, the Reference Energy System (RES) based modeling of Hereke Asım Kocabıyık Vocational School's energy system will be viewed and analyzed for the first time by the academic community as a flow diagram of resource technologies, process technologies, demand technologies, and end-user demand. The research will use the Reference Energy System modeling (RES), which is being evaluated for the first time, employing digital diagrams of end-user technologies, demand technologies, and fundamental factors. The technical parameters will be shared with numerical data of the total electricity consumption, total natural gas consumption and transportation expenses of the last five years obtained from the administrative and accounting units of the Vocational School, compared with graphics and given in the study. In the coming years, it is planned to simulate the current RES Modeling energy supply and demand processes in detail and to perform scenario analysis of the current system performance. In addition, it is aimed to make plans with scenarios on different integrations, including the integration of renewable energy sources, energy efficiency strategies and system optimization approaches.

Development and Characterization of ZnO Coatings for Sustainable and Energy-Efficient Applications

DORUK GÜRKAN (Presenting), ÖZGÜR YURTSEVER, UTKU CANCI MATUR, EGEMEN SULUKAN, TANAY SIDKI UYAR

Electrophoretic Deposition (EPD) is a low-energy and eco-friendly coating process with high potential in renewable energy systems. ZnO coatings are promising in a wide variety of applications such as corrosion and wear protection, optoelectronics, antibacterial surfaces, hydrophobic coating and energy storage. Depending on the use, the coating may be applied for protective coatings in harsh environments, self-cleaning surfaces or as functional coatings for renewable energy devices such as solar cells and sensors. In this study, ZnO coatings deposited via EPD were studied to research their adhesion, morphology and mechanical properties. Adhesion strength was determined using a crosshatch tape test in accordance with ASTM D3359 and morphology analysis was conducted using optical microscopy to determine coating homogeneity, cracks and particle distribution. In addition, the mechanical robustness of the coatings was investigated using micro-vickers hardness testing. The findings will unveil the promise of ZnO coatings prepared with EPD towards their applicability in low-energy and green manufacturing. The increased demands for environmentally friendly processes, EPD is a viable process to integrate clean sources of energy in coating sciences towards reducing global warming by saving energy in the processing of materials.

Green Transition from Farm to Table: The European Green Deal and the WEFE Nexus Approach Sustainable Food Systems

YUSUF İSLAM YAVUZ

Reflections of the United Nations 2030 Sustainable Development Goals on the Sustainability and Climate Change Course Curriculum

AHMET NAYIR

Climate change attracts attention as an increasingly important issue worldwide. As in many other fields, educational institutions have shaped their efforts around this issue. This research aims to examine the Sustainability and Climate Change Course Curriculum (SCC) published by Turkish universities affiliated with the Council of Higher Education (YÖK) in terms of the United Nations (UN) 2030 Sustainable Development Goals (SDG). The extent to which the course content on climate change supports the 17 SDG targets was investigated through university websites. It is concluded that both the UN development goals and the European Union climate change mission can be implemented more effectively through university education.

The Effect of SWOT Analysis on the Sustainability Approach of a Leading Turkish Maritime Construction Company

ÖZLEM YURTSEVER, CEM ÇELİK, ERALP ÖZİL

The EU's mandatory Corporate Sustainability Reporting Directive (CSRD) is based on the widely used GRI framework but significantly introduces the concept of "dual materiality", which requires companies to report both their impacts on society and the environment, and how sustainability issues affect the company itself. This study practically demonstrates the importance of a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis to be applied at the initial stage to reveal this "dual materiality" when preparing a sustainability report for a company. In the context of the application in question, the design of the SWOT analysis, the objectives of the questions, the interpretation of the analysis results, and the effects of the findings on the sustainability report study and sustainability goals are presented.

Leveraging SWOT Analysis in Sustainability Reporting: A Double Materiality Perspective

CEM ÇELİK, ÖZLEM YURTSEVER, ERALP ÖZİL

Evolving sustainability reporting standards are beginning to consider not only the impact of company activities on the environment and society but also the impact of external factors on the company itself. A carefully prepared SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis, incorporated into the early stages of sustainability reporting, has the potential to be a powerful tool in revealing this two-way interaction. This article presents the use of SWOT analysis as a strategic tool within the framework of double materiality for corporate sustainability reporting. It demonstrates how SWOT analysis can help organizations comprehensively assess both internal financial materiality and external social and environmental impacts, thus aligning with regulatory requirements and stakeholder expectations. By systematically evaluating internal capabilities and the external landscape, SWOT offers a structured method for identifying key issues that support the dual focus inherent in the double materiality approach.

Energy Production from Municipal Solid Waste in Iğdır Province

EGEMEN GENÇOĞLU

Renewable energy sources are gaining importance every day to meet the increasing energy demand. Biomass energy is a renewable alternative to fossil fuels, with its nature-friendly, environmentally sustainable characteristics. In this study, the amount of energy produced from municipal solid waste in Iğdır Province was determined and compared with other provinces in the Eastern Anatolia Region and across Türkiye. Municipal solid waste refers to non-hazardous solid waste generated from residential areas under the responsibility of municipalities, including parks, gardens, and picnic areas.

The amount of electricity obtained from unit biomass in Iğdır was calculated and compared with national and global averages. The results indicate that the electricity obtained from unit biomass in Iğdır Province is below both Turkish and global averages. The proposed facility has an installed capacity of 1.20 MW and an average annual electricity production of 5 GWh. It was found that the electricity yield per unit biomass in Iğdır corresponds to 22% of the global average and 67.5% of the Turkish average. Iğdır Province has a relatively low share in electricity production from municipal solid waste compared to both Türkiye and the world. Accordingly, alternative solution suggestions have been presented to improve the efficiency of energy production from municipal solid waste

Structural Analysis of a NREL 5 MW Wind Turbine Exposed to Combined Aerodynamic and Tsunami Wake Forcing

BARIŞ NAMLI (Presenting), CİHAN BAYINDIR

Wind turbines located in coastal areas are essential for generating energy from renewable sources. However, due to environmental factors, their construction, analysis, and operation are extremely difficult and complex. It is especially challenging to examine the aerodynamic and hydrodynamic behavior of wind turbines in coastal areas under natural events such as tsunamis.

This study investigates the aerodynamic, hydrodynamic, and structural behaviors of the NREL 5 MW wind turbine positioned in a coastal region under the combined effects of tsunami wakes and wind. First, the geometric properties of the NREL 5 MW wind turbine were determined, and its aerodynamic analysis was conducted using the Blade Element Momentum (BEM) approach. Then, the tsunami wave elevations generated by the earthquake that occurred on August 30, 2020, were analyzed. The necessary data for this analysis were obtained from the UNESCO data portal at the Bodrum station. The wave elevation time series of the tsunami wakes were applied to the NREL 5 MW wind turbine to assess their hydrodynamic impacts. Simultaneously, the aerodynamic effects of the wind acting on the turbine were also examined. QBlade software was used in all simulations. This study aims to make a significant contribution to future research by conducting aerodynamic, hydrodynamic, and structural analyses of a wind turbine exposed to both tsunami and wind forces.

Assessment of Wind Forecasting over the Aegean Sea with WRF Simulations

NURİ ERKİN ÖÇER (Presenting), İSMAİL H. TUNCER

This study investigates the wind fields over much of the Aegean Sea using nested domains within the Weather Research and Forecasting (WRF) model. The highest-resolution innermost nest is centered on the Aliağa Gulf. Boundary and initial conditions for the WRF simulations are derived from Global Forecast System (GFS) data. The accuracy of the WRF output is evaluated through comparisons with satellite-derived ASCAT Metop scatterometer data and ground-based meteorological measurements.

Preliminary findings reveal a domain-wide average wind speed of 8.73 m/s and direction of 315.77° from WRF, compared to 9.35 m/s and 335.37° from ASCAT, indicating deviations of 6.63% in magnitude and 5.84% in direction. The domain-wide root mean square error (RMSE) is 1.80 m/s for wind speed and 25.86° for wind direction. Considering ASCAT's known tendency to overestimate wind speeds by +0.1 to +1.0 m/s compared to in-situ measurements, the WRF model demonstrates promising accuracy and high-resolution capability over marine environments.

The study offers valuable insight into improving wind power forecasting and optimizing micro-scale placement of offshore wind turbines. The full paper will provide a detailed evaluation of the WRF model parameters over extended simulation periods and comparisons with meteorological mast (met mast) data.

Modeling of Composite Structured Wind Turbine Blade with COMSOL Multiphysics Analysis

ECEM ZEYNEP ÖZTÜRK (Presenting), ZEYNEP OBALI

As the global population continues to increase, so does the demand for energy. Addressing this demand has made the use of renewable energy sources inevitable.

Among the most preferred renewable energy sources is wind energy. However, due to the noise and weight of wind turbine blades, material selection becomes a critical factor in blade manufacturing. Therefore, composite materials were considered in this study for blade design, as they are preferred for their lightweight and favorable mechanical properties.

This study aims to develop more durable and long-lasting blades by using simulation programs that incorporate computer modeling to evaluate various alternative composite materials. COMSOL Multiphysics Analysis was used for simulation. A blade stress analysis was conducted under the influence of gravity-induced loads, and eigenfrequency analyses were performed across various operating speeds. Based on these analyses, a Campbell diagram was created, which illustrates the variation of eigenfrequencies with rotational speed. The Campbell diagram is a tool that maps the vibration frequencies of a system across a range of rpm values.

In the blade modeling process, multiple combinations of materials were tested, including Carbon epoxy, Carbon vinylester, Carbon phenolic, Glass epoxy, Boron epoxy, Glass vinylester, Thermoset polyester, Polyvinyl Chloride, Polystyrene, Polyethyleneimine, Polyethylene Terephthalate, and Styrene acrylonitrile. Campbell diagrams were generated for each to identify the most suitable blade structure[s].

Hydrogen as a Sustainable Energy Carrier: A Comprehensive Review of Technological and Economic Challenges

MOAZ BILTO (Presenting), TANAY SIDKI UYAR

We present a review on the current state of hydrogen-powered energy systems, analyzing their potential in accelerating decarbonization across many hard-to-abate sectors that are heavily reliant on conventional fuels. Hydrogen is unique in its high energy density of 120 MJ/kg, making it a highly competitive alternative to conventional fuels. The ongoing race towards global decarbonization and 100% renewable energy systems across various sectors could be significantly accelerated by scaling up hydrogen deployment, which could potentially reduce CO₂ emissions by up to 800 million tonnes annually.

Despite all the advantages of hydrogen, it comes with many challenges that compromise its widespread adoption. Furthermore, even current state-of-the-art technologies in hydrogen are held back by relatively low efficiency, high operational costs, and high initial investment costs. Commercial electrolyzers currently achieve efficiencies around 60–70%, with some advanced and expensive systems reaching up to 80% under unrealistic ideal scenarios. Green hydrogen, on the other hand, currently costs around \$4–7 per kilogram, depending on the production location and technology used, which remains relatively above the global target of \$2/kg, making it noncompetitive with other fuels for now.

Moreover, hydrogen storage is one of the biggest barriers, requiring high compression conditions up to 700 bar or extremely low cryogenic temperatures below -253 °C for liquefaction. Until these technical challenges are overcome, hydrogen's full feasibility will remain limited. We emphasize that to fully achieve and unlock hydrogen's potential as a sustainable green energy carrier, further strategic planning, technological development, interdisciplinary collaboration, and robust policy support will be necessary. Enhancing its overall market integration will be a critical step toward building a hydrogen-fueled low-carbon future.

Too Fast, Too Late? How Fast Transition to Renewable Energy May Hinder Climate Action?

MURAT ÇETİN (Presenting), ÇAĞDAŞ BAŞAR BAHAR, TANAY SIDKI UYAR

As the global transition to renewable energy accelerates, the emphasis on sustainability and low-cost energy system design appears to be sidelining the long-term imperative of energy security.

This study argues that the rapid and unplanned expansion of renewable energy, in the absence of adequate physical infrastructure and regulatory frameworks, may lead to energy security challenges. Such challenges risk eroding public trust in renewable energy, arguably the most critical component in the fight against climate change. A loss of public confidence, in turn, threatens to undermine the goal of a carbon-neutral planet and hinder the broader transition to a circular economy.

While roadmaps for a rapid energy transition do exist, tackling the climate crisis effectively requires more than top-down policies or technological fixes; it demands a firm and collective commitment across all segments of society. In this context, the study examines the paradox that an overly rapid and imprudent transition may, paradoxically, slow down the very process it seeks to accelerate by diminishing public trust.

The study aims to develop a political economy framework that critically interrogates policy processes driven by inflated positive public perception and awareness of renewable energy. Within this framework, a critical comparison is conducted between the innovation tools proposed by the International Renewable Energy Agency (IRENA) as part of its roadmap for accelerated transition and existing policy instruments. Ultimately, the study emphasises the risk that "greenwashing" through renewable energy could derail genuine climate action.

From Sustainable Energy and Climate Action Plans (SECAPs) to Action: Local Climate Leadership in Türkiye

DAİVA MATONIENÉ

The EU4 Energy Transition: Covenant of Mayors in the Western Balkans and Türkiye (EU4ETTR) project supports municipalities in turning Sustainable Energy and Climate Action Plans (SECAPs) into measurable, actionable outcomes. This Multi Donor Action is jointly co-financed by the European Union and the German Federal Ministry for Economic Cooperation and Development, and is implemented by GIZ in the Western Balkans and the Central Project Management Agency (CPMA) in Türkiye.

In Türkiye, the project has established the Multi-Level Governance Platform for Climate (MLGP4Climate), now connecting over 70 municipalities and 35 associations with national institutions and international partners. The platform facilitates structured collaboration, expert working groups, and access to a digital portal offering more than 700 resources, including funding calls, guides, and SECAP tools.

Through MLGP4Climate, municipalities receive tailored support to develop or revise their SECAPs, access climate finance, and implement impactful mitigation and adaptation projects—closing the gap between planning and implementation. The platform also helps align local action with national policies and EU climate frameworks, contributing to Türkiye's 2053 net-zero target.

MLGP4Climate demonstrates how institutionalized multi-level governance can transform local governments into proactive climate actors—and serves as a replicable model for accelerating municipal climate action in diverse governance contexts.

Integrating H₂ into B-U Energy Models for Decarbonizing C40 Cities by 2050: An Application of ETEM for the Montréal Metropolitan Community

SARA GHABOULIAN ZARE (Presenting),
OLIVIER BAHN, NORMAND MOUSSEAU,
MARTIN TRÉPANIER

Achieving net-zero greenhouse gas emissions by 2050 requires transformative changes in urban energy systems, particularly in cities like those in the C40 network. Hydrogen (H₂) is emerging as a crucial energy carrier for decarbonizing sectors where electrification is less feasible, such as heavy transportation, high-temperature industrial processes, and space heating.

This study integrates H₂ technologies into the Energy-Technology-Environment Model (ETEM), a bottom-up energy system optimization model, tailored to the Montréal Metropolitan Community. The model incorporates updated data on H₂ production, storage, distribution, and end-use technologies, and evaluates their role under multiple policy scenarios, including carbon caps and investment tax credits. We assess four scenarios ranging from business-as-usual to aggressive decarbonization with optimistic technology assumptions.

Results show that hydrogen adoption grows significantly under stringent climate targets, particularly in freight transport and industrial heating. Electrolytic hydrogen becomes the dominant production pathway, driven by renewable electricity and supportive policies. The study highlights the importance of policy design, technology advancement, and detailed urban modeling in guiding C40 cities toward sustainable energy transitions.

Optimal Energy Provision in Prosumer Households: A Comparative Analysis

SYED ALI MASHOOD NAQVI (Presenting),
SASCHA BIRK

The increasing demand for intelligent energy usage is driven by advancements in modern technologies and the widespread integration of smart systems in various aspects of life. Consequently, the incorporation of smart systems within energy systems has become imperative, particularly considering the escalating risks associated with climate change and global warming. A great amount of research has been conducted to not only reduce the cost to optimize grids but also to minimize the distribution of electricity.

This paper addresses the pressing need to optimize energy grids and compares the strengths and weaknesses of two approaches for optimizing energy flow in small grids: a linear optimization model and Reinforcement Learning (RL). For this purpose, both approaches are used to optimize energy flows in a small grid with single-family households, which receive electricity from battery storage, photovoltaic (PV), and the public electricity grid. The linear optimization model serves as a reference for energy optimization. RL incorporates an observation space that uses data collected from energy resources. Its main goal is to enable the system to intelligently derive electricity from the cheapest source available.

The objective is to reduce electricity costs while considering local grid restrictions. The maximum power on the line connecting each house to the grid is constrained. In conclusion, both models demonstrate specific strengths and weaknesses. Future research on RL should investigate its performance across multiple households with diverse electricity sources. A promising improvement would be the integration of multi-agent RL models, which warrants further exploration to advance RL-based energy optimization techniques.

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Türkiye'nin Karadeniz Bölgesi ile İç Anadolu Bölgesi arasında geçiş konumunda yer alan Amasya, tarih boyunca birçok medeniyete ev sahipliği yapmış köklü bir yerleşim yeridir. Yeşilırmak Nehri'nin şekillendirdiği vadi üzerine kurulu şehir, hem doğal güzellikleri hem de kültürel birikimiyle Anadolu'nun nadide şehirlerinden biri olma özelliğini taşımaktadır.

Hitit tabletlerinde "Kutlu akarsuyu olan kent" olarak anılan Amasya, tarih boyunca krallara ve şehzadelere ev sahipliği yapmış; Osmanlı döneminde ise önemli bir sancak merkezi olarak ön plana çıkmıştır. Şehrin tam ortasından kıvrılarak geçen Yeşilırmak (antik adıyla İris Nehri), kenti yalnızca ikiye bölmekle kalmaz, aynı zamanda ona eşsiz bir estetik kazandırır. Nehir kenarındaki Osmanlı dönemi mimarisini yansıtan Yalıboyu Konakları, kayalara oyulmuş Kral Kaya Mezarları ve şehrin zirvesine konumlanmış Harşena Kalesi ile Amasya, tarih ve doğanın iç içe geçtiği bir açık hava müzesi niteliğindedir.

Antik çağın önemli coğrafyacısı Strabon'un memleketi olan Amasya, bilim ve kültür tarihi açısından da özel bir yere sahiptir. Şehir merkezinde ve çevresinde yapılan arkeolojik kazılarda elde edilen buluntular, Amasya'nın tarihinin M.Ö. 5000'li yıllara kadar uzandığını ortaya koymaktadır. Roma, Bizans, Selçuklu ve Osmanlı gibi büyük uygarlıklara ev sahipliği yapan kent, aynı zamanda II. Bayezid, Yavuz Sultan Selim ve Kanuni Sultan Süleyman gibi Osmanlı padişahlarının şehzadelik yaptığı bir eğitim ve yönetim merkezi olmuştur.

Günümüzde Amasya Belediyesi, bu köklü mirası modern kent yönetimiyle harmanlayarak sürdürülebilir ve yaşanabilir bir şehir vizyonuyla hizmet vermektedir. Stratejik planlama, çevresel altyapı yatırımları, sosyal belediyeçilik ve katılımcı yönetim gibi alanlarda yürütülen çalışmalarla kentsel gelişimi bütüncül bir bakış açısıyla ele almaktadır. "Belediye Başkanları Sözleşmesi" kapsamında hazırlanan Sürdürülebilir Enerji ve İklim Eylem Planı (SECAP) ile Amasya, iklim değişikliğiyle mücadelede aktif sorumluluk alan şehirler arasında yer almaktadır.

Yeşil alanların artırılması, yenilenebilir enerji uygulamaları, kültürel mirasın korunarak gelecek nesillere aktarılması, sosyal kapsayıcılığın güçlendirilmesi ve afetlere dirençli kentleşme gibi birçok başlıkta kararlılıkla çalışan Amasya Belediyesi, geçmiş ile geleceği bütünleştiren bir yerel yönetim anlayışını benimsemektedir.

Situated at the intersection of the Central Black Sea Region and the Central Anatolia Region of Türkiye, Amasya is a city that has served as a cradle for many civilizations throughout history. Built along the valley shaped by the Yeşilırmak River (ancient Iris River), the city combines its rich cultural heritage with natural beauty, offering a unique urban identity that bridges the past and the future.

Referred to in Hittite tablets as "the city with the sacred river," Amasya has historically been a residence for ancient kings and later Ottoman princes. During the Ottoman era, it was a prominent sancak (district) and a significant administrative and cultural center. The Yeşilırmak River, which meanders through the heart of the city, does not merely divide the settlement—it enhances its aesthetic and symbolic significance. Along its banks stand the Yalıboyu Houses reflecting classical Ottoman architecture, while above, the rock-carved Royal Tombs and the Harşena Fortress dominate the landscape, turning the city into a natural open-air museum.

Amasya is also known as the birthplace of Strabo, the renowned ancient geographer, underscoring the city's importance in the history of science and thought. Archaeological findings from the city and its surroundings indicate a history dating back to 5000 BCE, with traces of Hittite, Phrygian, Roman, Byzantine, Seljuk, and Ottoman civilizations.

Today, Amasya Municipality embraces a forward-looking governance model that honors the city's historical legacy while prioritizing sustainable urban development. Through strategic planning, resilient infrastructure investments, participatory governance practices, and inclusive social policies, the municipality actively shapes a livable and environmentally responsible city. Under the commitments of the Covenant of Mayors for Climate and Energy, Amasya has developed and implemented its Sustainable Energy and Climate Action Plan (SECAP), positioning itself among the proactive local governments in the global fight against climate change.

Efforts such as expanding green spaces, promoting renewable energy, preserving tangible and intangible heritage, enhancing social inclusion, and ensuring disaster-resilient urban planning reflect the city's comprehensive sustainability approach. Amasya Municipality represents a strong example of how deep historical roots and modern sustainability objectives can coexist within a coherent local governance model.

Türkiye'nin orta kuzeyinde yer alan Amasya İlinin Merkez ilçe dahil yedi ilçesi bulunmaktadır. Merkez ilçeden sonra en büyük yerleşim yeri olan Merzifon, Karadeniz Bölgesi'nin orta bölümünde ve Kuzey Anadolu Dağları'nın alçalarak güneydeki İç Anadolu'ya geçit verdiği kesimde yer almaktadır.

Strabon'un "Bin köy"; olarak belirttiği bölgede yapılan arkeolojik araştırmalarda yüzlerce höyük ve yerleşim yerinin varlığı saptanmıştır. Bu höyüklerden elde edilen seramik ve buluntulara göre Merzifon tarihinin M.Ö. 5500'lere kadar uzandığı anlaşılmıştır. Merzifon bölgesinin Hitit döneminde de başkent Hattusa'sa sınır olması nedeni ile önemli bir merkez ve yerleşim yeri olduğu bilinmektedir.

Osmanlı döneminde Sivas eyaletine bağlı Amasya Sancağının kazası olan Merzifon önemli bir kültür merkezi olmaya devam etmiştir. 1402 yılında Yıldırım Beyazid ile Timur arasındaki savaşta dağılan Osmanlı birliğini Amasya şehzadesi Çelebi Sultan Mehmet yeniden sağlayarak Osmanlı tahtına çıkarmıştır. Bölgede sükunetin sağlanması ile Merzifon şehri de eski önemine kavuşmuştur.

70 köyü ve 20 mahallesi olan ilçenin, 2022 yılı verilerine göre merkez nüfusu 62.536, köy nüfusu 12.810, toplam nüfusu ise 75.346 kişidir. İlçenin yüz ölçümü 971 km²'dir. İklimi ise Karadeniz ve İç Anadolu bölgesinin ikliminden etkilenmektedir. Yazlar kurak ve yağışsız, kışlar ve baharlar yağışlı geçmektedir. Yıllık yağış miktarı ortalama 350 kg/m² olmaktadır.

İlçe ekonomisinde tarım ve hayvancılık önemlidir. Merzifon merkezi konumu, gelişmiş Organize Sanayi Bölgesi (OSB) ile sanayi alanında gelişme potansiyeli yüksek bir ilçe konumundadır. OSB, 1987 yılında kurulmuş olup tekstil ve elektrikli makine sektörleri ağırlıklıdır. 2023 verilerine göre; 94 parselin 92'si tahsis edilmiştir. 69 firma üretimde, 19 firma inşaat halinde, 4 firma ise proje safhasındadır. Merzifon OSB'de yaklaşık 8 bin kişi istihdam edilmektedir. Bu firmalar Avrupa ve diğer ülkelere önemli ölçüde ihracat yapmaktadırlar. Ayrıca ilçede 5. Ana Jet Üssü, Polis Meslek Eğitim Merkezi ve Amasya Üniversitesi'ne bağlı İktisadi ve İdari Bilimler Fakültesi ile Meslek Yüksekokulu da bulunmaktadır.

Amasya Province, located in the central north of Türkiye, has seven districts including the central district. Merzifon, the largest settlement after the central district, is located in the central part of the Black Sea Region and in the section where the Northern Anatolian Mountains descend and pass into Central Anatolia in the south.

Archaeological research in the region, which Strabon described as "a thousand villages", has revealed the existence of hundreds of mounds and settlements. According to the ceramics and finds obtained from these mounds, it was understood that the history of Merzifon dates back to 5500 BC. It is known that Merzifon region was an important center and settlement in the Hittite period as it was bordering the capital Hattusas.

During the Ottoman period, Merzifon, which was the accident of Amasya Sanjak of Sivas province, continued to be an important cultural center. In 1402, Çelebi Sultan Mehmet, the sultan's son of Amasya, re-established the Ottoman unity that disintegrated in the war between Yıldırım Beyazid and Timur and ascended the Ottoman throne. With the establishment of peace in the region, the city of Merzifon regained its former importance.

The district, which has 70 villages and 20 neighborhoods, has a central population of 62,536, a village population of 12,810, and a total population of 75,346 according to 2022 data. The land area of the district is 971 km². Its climate is influenced by the climate of the Black Sea and Central Anatolia regions. Summers are dry and rainy, winters and springs are rainy. The average annual rainfall is 350 kg/m².

Agriculture and animal husbandry are important in the district economy. Merzifon is a district with a high potential for development in the field of industry with its central location and developed Organized Industrial Zone (OIZ). The OIZ was established in 1987 and the textile and electrical machinery sectors are predominant. According to 2023 data; 92 of 94 parcels have been allocated. 69 companies are in production, 19 companies are under construction and 4 companies are in the project phase. Approximately 8 thousand people are employed in Merzifon OIZ. These companies export significantly to Europe and other countries. There is also the 5th Main Jet Base, Police Vocational Training Center, Faculty of Economics and Administrative Sciences and Vocational School of Amasya University.



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Tekirdağ'ın kuzeydoğusunda, doğal güzellikleri ve sakin yaşamıyla öne çıkan Saray ilçesi, Trakya'nın gözde yerleşim yerlerinden biridir. İstanbul'a yakın konumu sayesinde her geçen yıl daha da gelişen Saray, hem tarihi mirası hem de doğasıyla dikkat çeker.

Tarihi oldukça eskilere dayanan ilçede, geçmişte birçok uygarlığın izleri görülmektedir. Roma ve Bizans dönemlerinden kalma kalıntılar, Saray'ın uzun bir geçmişe sahip olduğunu gösterir. İlçenin adının, Osmanlı döneminde burada bulunan av köşkerinden geldiği düşünülmektedir.

Cumhuriyet döneminde ilçe statüsü kazanan Saray, bugün kültürel zenginlikleri, doğa ile iç içe yaşamı ve gelişen altyapısıyla öne çıkmaktadır. İlçede bulunan Çamlık Ormanı, Galata Deresi ve Kastro Sahili gibi alanlar, doğa tutkunlarının uğrak noktaları arasındadır.

51.224 kişinin yaşadığı Saray'da hem köy yerleşimleri hem de şehir merkezi dinamiktir. İklimi ise Marmara ile Karadeniz arasında bir geçiş özelliği taşır; yazlar genellikle kurak ve sıcak, kışlar ise ılık ve yağışlıdır.

İlçenin ekonomisi tarım, hayvancılık ve sanayiye dayanır. Özellikle ayçiçeği, buğday ve mısır gibi ürünler bölgede yoğun olarak yetiştirilir. Aynı zamanda gelişmekte olan sanayi yapısıyla da dikkat çeken Saray, organize sanayi bölgeleri sayesinde hem yerel ekonomiye hem de istihdama katkı sağlamaktadır.

Saray'da eğitim ve sosyal hizmetler alanında oldukça canlı bir doku bulunmaktadır. Çok sayıda ilkökul, ortaokul ve lise ile birlikte Namık Kemal Üniversitesi Saray Meslek Yüksek Okulu da bulunmaktadır. Kültürel faaliyetler, yerel festivaller ve halk oyunları gibi etkinliklerle ilçe sosyal yapısı şekillenmektedir.

Saray district, which stands out with its natural beauties and calm life in the northeast of Tekirdağ, is one of the favorite settlements of Thrace. Saray, which develops more and more every year thanks to its close location to Istanbul, attracts attention with its historical heritage and nature.

In the district, which dates back to ancient times, traces of many civilizations can be seen in the past. Remains from the Roman and Byzantine periods show that Saray has a long history. The name of the district is thought to come from the hunting mansions located here during the Ottoman period.

Saray, which gained district status during the Republican period, stands out today with its cultural richness, life intertwined with nature and developing infrastructure. Areas such as Çamlık Forest, Galata Creek and Kastro Beach in the district are among the frequent destinations for nature lovers.

In Saray, where 51,224 people live, both village settlements and the city center are dynamic. The climate is a transition between Marmara and the Black Sea; summers are generally dry and hot, while winters are mild and rainy.

The economy of the district is based on agriculture, animal husbandry and industry. Especially sunflower, wheat and corn are grown intensively in the region. At the same time, Saray, which attracts attention with its developing industrial structure, contributes to both local economy and employment thanks to organized industrial zones.

Saray has a very lively texture in the field of education and social services. There are many primary, secondary and high schools, as well as Namık Kemal University Saray Vocational High School.

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Borusan EnBW Enerji, 12 enerji santralinden oluşan yenilenebilir enerji kaynaklarına dayalı kurulu gücü ve portföyü ile Türkiye'nin ve dünyanın sürdürülebilirliğine doğrudan katkı sağlıyor. Rüzgâr enerjisi alanında lider üretim şirketlerinden olan Borusan EnBW Enerji'nin sürdürülebilirliğe temel yaklaşımı, faaliyetlerinde dünyanın sürdürülebilirliğine katkı sağlamak ve paydaşları için sürdürülebilir değer yaratmak.

Türkiye'nin ve dünyanın sürdürülebilirliğine doğrudan katkıda bulunmayı ve paydaşları için değer yaratmayı temel bir öncelik haline getiren Borusan EnBW Enerji'nin tamamı yenilenebilir enerji tesislerinden oluşan kurulu gücü 725 MW olurken Saros RES'e kurulacak 94 MWp gücündeki Saros GES ve sahip olunan RES ve depolamalı RES lisansları ile toplam portföyün 1343 MW'a ulaştı.

Mevcut Balabanlı RES tesisinin 36 MW kapasite artışı projesi ve 80 MW Pelit RES projeleri ile Saros RES içerisinde devreye alınacak tesisi hibrit santrale dönüştürecek güneş enerji santralinin geliştirme çalışmaları ise devam ediyor.

Bandırma Rüzgâr Enerji Santrali, Yedigöller-Aksu Hidroelektrik Santrali, Balabanlı Rüzgâr Enerji Santrali, Kuru Rüzgâr Enerji Santrali (55,2 MW), Mut Rüzgâr Enerji Santrali (55,2 MW) ve Harmanlık Rüzgâr Enerji Santrali (55,2 MW), Fuatres Rüzgâr Enerji Santrali (33,9 MW), Dayıcık Güneş Enerji Santrali (6,6 MW), Kartaldağı Rüzgâr Enerji Santrali (65,55 MW), Pamuklu Güneş Enerji Santrali (2,2 MW) ve Kıyıköy Rüzgâr Enerji Santrali (100 MW) ve Saros Rüzgâr Enerji Santrali (148 MW) ile Borusan EnBW Enerji Türkiye'nin yenilenebilir ve temiz enerji talebini karşılamak için çalışmalarını hız kesmeden sürdürüyor.

Temiz enerji ve sürdürülebilirlik konusundaki yatırımlarına devam eden Borusan EnBW Enerji, kuracağı hızlı şarj ağı ile müşterilerine tamamen temiz, hızlı ve son teknolojik standartlarda yapılandırılmış, kullanıcı dostu nitelikte kusursuz bir şarj deneyimi yaşatmayı amaçlıyor. Başlangıç olarak 500'ü aşkın noktada elektrikli araç hızlı şarj hizmeti verecek olan Borusan EnBW Enerji, bu alanda yapacağı yatırımlar ile bu sayıyı 7.000 noktaya çıkarmayı hedefliyor.

Sürdürülebilirlik alanında iklim, insan ve inovasyon başlıklarında kapsayıcı çalışmalar yürüten Borusan EnBW Enerji, yenilenebilir enerji kapasitesiyle yılda 1.400.000 ton karbon salımlarını önüyor. Biyoçeşitlilik kaybını azaltma ve ormansızlaşma ile mücadele için sürdürülebilir çalışmalara imza atan Borusan EnBW Enerji, yıllık ağaçlandırma çalışmalarına devam ediyor. Biyoçeşitliliğin korunmasına yönelik farklı özgün katkı projeleri yürüten şirket, Lilium Martagon (Sultan Zambağı) türünün korunması ve rejenerasyonu, genç orman ekosisteminin korunmasına ve kuş ve yarasalar türlerinin çoğaltılmasına yönelik, kuş evleri ve yarasalar tünelleri yerleşimi; Bandırma Karadağ bölgesinde kestane ağaçlarına zarar veren böceklerle organik mücadele etmeyi amaçlayan Karadağ Kestanesinin Geleceği ve tarımın ilk kez yapıldığı kadim Anadolu topraklarında ata tohumlarının çoğaltılması ve yaygınlaştırılması gibi birçok projeyi eş zamanlı olarak birbirinden farklı coğrafyalarda yürütüyor.

Tüm faaliyetlerinde temiz ve yenilenebilir enerjiyi, sürdürülebilirliği ve toplumsal faydayı gözetken Borusan EnBW Enerji, gelecek nesillere yaşanabilir bir dünya bırakmak için çalışmalarını hız kesmeden sürdürüyor.

Borusan EnBW Enerji directly contributes to the sustainability of Türkiye and the world with its installed capacity and portfolio based on renewable energy sources, consisting of 12 power plants. As a leading production company in wind energy, Borusan EnBW Enerji's fundamental approach to sustainability is to contribute to the sustainability of the world in its activities and to create sustainable value for its stakeholders.

Borusan EnBW Enerji, which prioritizes making a direct contribution to the sustainability of Türkiye and the world and creating value for its stakeholders, has an installed capacity consisting entirely of renewable energy facilities, which is 725 MW. With the Saros GEPP, a 94 MWp power plant to be installed in Saros WEPP, and the owned WEPP licenses and storage WEPP, the total portfolio is 1343 MW.

The development work continues for the solar power plant that will convert the existing Balabanlı RES facility into a hybrid power plant, along with the 36 MW capacity increase project for the Balabanlı WEPP and the 80 MW Pelit WEPP project to be commissioned within Saros WEPP.

Borusan EnBW Enerji is continuing its efforts without slowing down to meet Türkiye's demand for renewable and clean energy with Bandırma Wind Power Plant, Yedigöller-Aksu Hydroelectric Power Plant, Balabanlı Wind Power Plant, Kuru Wind Power Plant (55.2 MW), Mut Wind Power Plant (55.2 MW), Harmanlık Wind Power Plant (55.2 MW), Fuatres Wind Power Plant (33.9 MW), Dayıcık Solar Power Plant (6.6 MW), Kartaldağı Wind Power Plant (65.55 MW), Pamuklu Solar Power Plant (2.2 MW), Kıyıköy Wind Power Plant (100 MW), and Saros Wind Power Plant (148 MW).

Continuing its investments in clean energy and sustainability, Borusan EnBW Enerji aims to provide its customers with a flawless clean charging experience that is fast, and structured with the latest technological standards through its planned fast charging network. Initially, Borusan EnBW Enerji will provide electric vehicle fast charging services at over 500 points, and aims to increase this number to 7,000 with its investments in the field. The company aims to offer a user-friendly charging experience to its customers.

Borusan EnBW Enerji, which carries out inclusive work in the areas of climate, people and innovation in the field of sustainability, prevents the emission of 1.4 million tons of carbon per year with its renewable energy capacity. The company, which signs sustainable practices to reduce biodiversity loss and deforestation, continues its annual afforestation efforts. The company, which carries out different unique contribution projects for the protection of biodiversity, aims to protect and regenerate the Lilium Martagon (Turkish Lily) species, protect the young forest ecosystem and increase bird and bat species through the installation of bird houses and bat roosts, and combat pests damaging chestnut trees in the Bandırma Karadağ region with organic methods, as well as propagate and spread ancestral seeds in ancient Anatolian lands where agriculture was first performed, and carries out many projects simultaneously in different geographies.

Borusan EnBW Enerji, which prioritizes clean and renewable energy, sustainability and social benefit in all its activities, continues its efforts without slowing down to leave a livable world for future generations.

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Otomotiv, Medikal, Havacılık, Hassas Teknoloji, Takım İmalatı, Makine Mühendisliği: CHIRON Group işleme merkezleri, bu endüstrilerde hassas, verimli ve esnek işleme sağlar. Bu uzmanlık bir tesadüf değil, makine mühendisliğindeki sürekliliğin ve teknoloji ve ürün yelpazesindeki güçlü değişimin sonucudur.

Değişim biçimlendirici ilkedir; 1921'den beri şirkette akmaya devam eden ve CHIRON Grubu'nun DNA'sına sıkı sıkıya örülmüş ortak bir çizgidir. Şirket, müşterilerin ve pazarların taleplerini karşılamak, potansiyeli hızla fark etmek ve sistematik olarak kullanmak için değişmeye istekli olmuştur.

Yenilikçi ürün ve hizmetleriyle CHIRON Group artık birçok farklı endüstride hassas, üretken ve esnek işlemeyi kolaylaştırıyor. Tüm çalışanları ile birlikte tek bir hedefin peşinden gidiyor: Dünyanın dört bir yanındaki tüm müşteriler için kalite, teknoloji ve hizmet açısından referans noktası olarak kalmak ve onların avantajlarını geliştirmek. Bir şey, gelecekteki olumlu gelişme için her zaman olduğu kadar önemli olmaya devam ediyor: Hassasiyet tutkusu.

Automotive, Medical Technology, Aerospace, Precision Technology, Tool Manufacturing, Mechanical Engineering: The CHIRON Group machining centers ensure precise, productive, and flexible machining in these industries. This expertise is no accident, but the result of continuity in mechanical engineering, and a strong change in technology and product range.

Change is the formative principle; it is the common thread that has continued to run through the company since 1921 and is firmly woven into the DNA of the CHIRON Group. The company has been willing to change to meet the demands of the customers and markets, to quickly recognize potential, and to systematically exploit it.

With its innovative products and services, the CHIRON Group now facilitates precise, productive, and flexible machining in many different industries. Together, all employees are pursuing one goal: Remaining the benchmark for quality, technology, and service for all customers around the world and building on their advantage. One thing remains as important for future positive development as it ever has been: The passion for precision.



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İş Enerji Yatırımları A.Ş. (İş Enerji), İş Bankası Grubu'nun bir parçası olarak 2022 yılı Ağustos ayında kurulmuştur. Kısa sürede yapmış olduğu ortaklık anlaşmalarıyla başta rüzgar, güneş santralleri olmak üzere yenilenebilir enerji kaynaklarına dayalı entegre bir enerji portföyüne sahip olan İş Enerji, İş Bankası Grubu'ndan almış olduğu güçle kısa sürede Türkiye'nin önde gelen enerji firmalarından olmayı hedeflemektedir.

2022 yılından beri İş Bankası iştiraki olarak faaliyetlerine devam eden İş Enerji Yatırımları A.Ş. yurtiçi faaliyetlerinin yanı sıra yurtdışında da kurmuş olduğu şirketlerle proje geliştirme ve yapım çalışmalarına devam etmektedir. 2023 yılı sonunda 833 MW kurulu güce sahip olan İş Enerji'nin hedefi ülkemizin dışa bağımlılığını azaltmanın yanı sıra çevreye duyarlı ve verimli yatırımlar yaparak Türkiye'nin önde gelen enerji üreticileri arasında yer almaktır.

İş Bankası Grubu'nun enerji bağımlılığını azaltacak dönüşümü yönetme ve enerji sektöründe etkili bir aktör olma misyonlarına sahip olan İş Enerji, vizyon olarak, grubun sürdürülebilirlik yaklaşımına ve bu yaklaşımının bir parçasını oluşturan "yeşil ekonomi" dönüşümüne katkı sağlamayı amaçlamaktadır.

İş Enerji Yatırımları A.Ş. (İş Enerji) was established in August 2022 as a part of İşbank Group. With an integrated energy portfolio based on renewable energy sources, especially wind and solar power plants, and the partnership agreements it has made in a short time, İş Enerji aims to become one of the leading energy companies in Türkiye in a short time with the power it has received from İşbank Group.

İş Enerji Yatırımları A.Ş., which has been operating as a subsidiary of İşbank since 2022, is continuing its project development activities with the companies it has established abroad as well as its domestic activities. By the end of 2023, İş Enerji will have an installed capacity of 833 MW. The company's goal is to become one of Türkiye's leading energy producers by making environmentally friendly and efficient investments and reducing the country's dependence on foreign sources.

İş Enerji's mission is to manage the transformation that will reduce the energy dependency of İşbank Group and become an effective actor in the energy sector. The company aims to contribute to the group's sustainability approach and the "green economy" transformation that forms part of this approach.

2006 yılında Kıvanç Enerji Elektrik Üretim AŞ'nin (Kıvanç Enerji) kuruluşuyla temelleri atılan Kıvanç Enerji Grubu, enerji sektörünün farklı alanlarında hizmet sunan bir şirketler topluluğudur. Kıvanç Enerji Grubu, Kıvanç Enerji tarafından yürütülen elektrik üretimi, satışı ve Güneş Paneli Üretimi başta olmak üzere enerji sektörünün farklı alanlardaki faaliyetleri ile entegre bir hizmet karması sunmaktadır.

Kıvanç Enerji Grubu; "Elektrik Üretimi", "Elektrik Satışı ve Ticareti", "Enerji Santrallerinin İnşası ve İşletmesi" ve "Güneş Paneli Üretimi" olmak üzere dört farklı alanda faaliyet göstermektedir. Kıvanç Enerji sürdürülebilirliğe her yönüyle katkı sağlayan projeler gerçekleştirme ilkesiyle hareket etmekte, elektrik üretim portföyünde yenilenebilir kaynak payını artırarak kaynak çeşitlendirmesine gitme hedefi ve vizyonu doğrultusunda yatırımlarına devam etmektedir.

Kıvanç Enerji, Türkiye'nin yerli ve yenilenebilir enerji kaynaklarının en verimli düzeyde kullanılarak ekonomimize kazandırılabilmesi için çalışmalarını sürdürmektedir. Şirketimiz, ülkemizin yüksek potansiyele sahip olduğu alanlardan Güneş, Rüzgâr ve Hidroelektrik enerjisi alanında yatırım yapmaktadır.

Kıvanç Enerji Grubu bünyesinde, işletmede; üç adet Hidroelektrik Enerji Santrali, iki adet Rüzgâr Enerji Santrali ve arazi ve çatı olmak üzere yirmi bir adet Güneş Enerji Santrali ile toplamda 251,00 MW kurulu güce sahiptir. 936,00 MW kapasiteye sahip Önlisans ve Lisansları alınmış inşaat ve izin süreçleri devam eden altı adet Rüzgâr Enerji Santrali, on iki adet Güneş Enerji Santrali ve bir adet Kojenerasyon Tesisi bulunmaktadır. Projelerimizin tamamı işletmeye geçtiğinde grubumuz toplamda 1.187,00 MW kurulu güce ulaşacaktır.

Founded in 2006 with the establishment of Kıvanç Energy Electricity Generation Inc. (Kıvanç Energy), Kıvanç Energy Group is a group of companies that provides services in different areas of the energy sector. The group provides an integrated service mix, including electricity production, sales, and solar panel manufacturing, among other activities in the energy sector.

The Kıvanç Energy Group operates in four distinct areas: "Electricity Production," "Electricity Sales and Trade," "Construction and Operation of Power Plants," and "Solar Panel Manufacturing." Kıvanç Enerji is committed to implementing projects that contribute to sustainability in all aspects and continues its investments to increase the share of renewable sources in its electricity generation portfolio, aiming for resource diversification.

Kıvanç Enerji continues its efforts to efficiently utilize Türkiye's domestic and renewable energy resources. The company invests in solar, wind, and hydroelectric energy, areas where the country has high potential.

Within the Kıvanç Energy Group, the operational assets include three Hydroelectric Power Plants, two Wind Power Plants, and four Solar Power Plants (both ground-mounted and rooftop), totaling an installed capacity of 251.00 MW. Additionally, there are six Wind Power Plants (currently under construction and awaiting necessary permits) and twenty-one Solar Power Plants and one Cogeneration Facility with a combined capacity of 936.00 MW. Once all projects are operational, the group will reach a total installed capacity of 1,187.00 MW.

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Rönesans Enerji, Rönesans Holding'in bağlı şirketlerinden biridir ve enerji sektöründe yatırım yapmaktadır. Rönesans Enerji, faaliyetlerini yürütürken, Holding'in inşaat alanında kazandığı deneyimlerden büyük ölçüde yararlanmakta ve bu deneyimleri, stratejik hedeflerine ulaşabilmek amacıyla kullanmaktadır.

Rönesans Enerji, hızla büyüyen Türk enerji piyasasındaki yatırım olanaklarını değerlendirebilmek amacıyla 2007 yılında kurulmuştur. Enerji sektöründe oldukça deneyimli bir ekibe sahip olan Rönesans Enerji, faaliyetlerine öncelikle, yenilenebilir enerji üretimi alanında yatırım yaparak ve özellikle de hidroelektrik santralleri inşa ederek başlamıştır.

İşletmede toplam 166 MW kurulu güce sahip 6 Hidroelektrik santral yatırımı olan şirket, son dönemde toplam gücü 480 MW'a ulaşan bir çok rüzgar ve güneş santrali ile ilgili geliştirme çalışmaları yapmakta ve yenilenebilir enerji sektöründe yerini sağlamlaştırmak istemektedir.

Rönesans Energy is a subsidiary of Rönesans Holding and invests in the energy sector. While conducting its operations, Rönesans Energy benefits greatly from the Holding's experience in the construction sector and utilizes this experience to achieve its strategic goals.

Rönesans Energy was established in 2007 to capitalize on investment opportunities in the rapidly growing Turkish energy market. Rönesans Energy, which has a highly experienced team in the energy sector, started its operations primarily by investing in renewable energy generation, particularly in the construction of hydroelectric power plants.

The company, which has 6 hydroelectric power plants with a total installed capacity of 166 MW in operation, has recently been working on the development of several wind and solar power plants with a total capacity of 480 MW and wants to consolidate its position in the renewable energy sector.

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Tatmetal, Türkiye'nin lider yassı sac üreticilerinden biri olarak Tatçelik markası altında; sıcak haddelenmiş asitlenmiş, soğuk haddelenmiş, galvanizli ve boyalı yassı çelik üretimi gerçekleştirmektedir. Hizmet verdiği sektörlerin başında; Otomotiv, Dayanıklı Tüketim, İnşaat, Enerji, Ambalaj ve Makine-Ekipman gelmektedir. 1,5 milyon tonu aşan kapasitesiyle sektörde global bir oyuncu olarak 6 kıtada 70'ten fazla ülkeye ihracat gerçekleştirmekte, Türkiye'nin en büyük ilk 500 sanayi şirketi arasında 31'inci sırada yer almaktadır.

Tatmetal produces hot-rolled pickled, cold-rolled, galvanized, and prepainted flat steel through the Tatçelik brand as one of Türkiye's leading flat steel producers. Automotive, White Goods, Construction, Energy, and Machinery-Equipment are the leading industries Tatmetal serves. As a global player in the sector, Tatmetal exports to more than 70 countries on 6 continents, and it is ranked 31st among the first 500 largest industrial companies in Türkiye.

Vestas, sürdürülebilir enerji çözümlerinde enerji endüstrisinin küresel ortağıdır. Şirket, dünya genelinde rüzgâr türbinleri tasarlar, üretir, kurar ve bakımını yapar. 88 ülkede 188 GW'in üzerinde kurulu rüzgâr türbini kapasitesiyle Vestas, bugüne kadar herkesten daha fazla rüzgâr enerjisi kurulumu gerçekleştirmiştir.

Endüstrinin Lideri

Rüzgâr endüstrisinde 40 yılı aşkın deneyimiyle Vestas, rüzgâr enerjisini hayata geçirme konusunda herkesten daha fazla tecrübeye sahiptir. Müşterileriyle birlikte, 188 GW'in üzerinde rüzgâr enerjisi kapasitesi (10 GW'in üzerinde açık deniz kurulumu dahil) gerçekleştiren Vestas, bu eşsiz başarısını ürünlerin sürekli iyileştirilmesi ve performans optimizasyonu için bir temel olarak kullanmaktadır. Bu benzersiz deneyim, Vestas'ın uzmanlığının ve rakipsiz tecrübesinin bir göstergesidir.

Küresel Deneyim

Vestas türbinleri, dünya genelinde 88 ülkede kurulmuş olup, yüksek irtifadan aşırı hava koşullarına kadar her türlü alanda çalışmaktadır. Vestas rüzgâr türbinleri, bu çeşitli zorluklarla başa çıkmak için amaca yönelik ürün geliştirme ve endüstrinin en büyük test tesislerinde kapsamlı testlerden geçirilmiş teknolojilerle donatılmıştır.

Platformlar

Vestas'ın 2 MW ve 4 MW platformları sırasıyla 2000 ve 2010 yıllarında piyasaya sürülmüş olup, şu anda 48 ve 60 ülkede kuruludur. 2019 yılında tanıtılan EnVentus platform mimarisi, 2 MW, 4 MW ve 9 MW platform türbin teknolojilerinden kanıtlanmış sistem tasarımlarını bir araya getirmektedir. 9 MW açık deniz platformu ise ilk kez 2014 yılında tanıtılmış ve bugüne kadar 7,5 GW'in üzerinde kurulum gerçekleştirilmiştir. Vestas'ın esnek ürün yelpazesi, sahaya özgü koşullara tam uyum sağlamaktadır.

Dünyanın En Büyük Türbin Filosuna Hizmet Verme

Rüzgâr türbinlerinin bakımı, endüstriyel deneyim, derinlemesine bilgi ve teknik yenilik gerektirir. 71 ülkede görev yapan 11.000'den fazla servis teknisyeninden oluşan ekibimiz, dünyanın en büyük rüzgâr türbini filosunu (155 GW karasal ve açık deniz kurulumu, 8 GW'in üzerinde Vestas dışı türbinler dahil) genellikle türbinlerin ömür boyu bakımını üstlenerek yönetmektedir. Tüm bu süreçte en yüksek kalite standartlarına ve güvenlik gerekliliklerine uyulmaktadır.

Küresel tedarik zincirimiz ve güçlü yerel varlığımızın birleşimi, dünya çapındaki rüzgâr enerjisi uzmanlığımızı sahaya taşımamızı sağlamaktadır.

Vestas Türkiye

Vestas, Türkiye rüzgâr pazarına 1998 yılında girmiş ve ülkede temiz ve sürdürülebilir enerjinin ilk adımlarının atıldığı dönemde endüstrinin öncüleri arasında yer almıştır. O tarihten bu yana şirket, yaklaşık 2,2 GW rüzgâr enerjisi kapasitesi kurmuş ve son 25 yılda İstanbul, Sivas, Adana ve Bandırma'da bulunan 4 servis ve bakım merkeziyle varlığını genişletmiştir. 2018 yılında hizmete açılan Bandırma Operasyon Merkezi, Türkiye ve diğer komşu ülkelerde çalışan teknisyenler için bir servis, eğitim ve lojistik merkezi olarak faaliyet göstermektedir.

Vestas, Türkiye'nin yenilenebilir enerji hedeflerine ulaşmasına katkıda bulunmak amacıyla yenilikçi, verimli ve rekabetçi rüzgâr çiftlikleri kurmanın yanı sıra, yerel katma değer yaratmak için ana bileşenlerin Türkiye'de üretilmesine odaklanmaktadır. Bugün, rüzgâr türbinlerimizin kanatları, çelik kuleleri, jeneratörleri ve kule bağlantı elemanları, Türkiye'deki yerel tedarikçilerimiz tarafından üretilmektedir. Vestas, yerel üretim için Türkiye'deki tedarikçilerine sürekli olarak bilgi birikimi, denetim ve eğitim desteği sağlamaktadır. Yerel rüzgâr türbini bileşen üreticilerinin başarısı, ihracat kapasitesi ve bu sayede Türkiye'de yaratılan ek istihdam imkânları bizim için bir gurur kaynağıdır.

Vestas is the energy industry's global partner on sustainable energy solutions. The company designs, manufactures, installs, and services wind turbines across the globe, and with more than 188 GW of wind turbines in 88 countries, Vestas has installed more wind power than anyone else.

Industry Leader

With more than 40 years in the wind industry, Vestas has more experience than anyone else in making wind work. Together with our customers, Vestas has installed more than 188 GW of wind power capacity, including more than 10 GW offshore. This unmatched track record is the backbone of Vestas' expertise and unrivalled experience powering continuous product improvement and performance optimization.

Experienced Worldwide

Vestas turbines have been installed in 88 countries around the world, operating on every kind of site, from high altitude to extreme weather conditions. Vestas wind turbines meet these diverse challenges through purpose-driven product development and extensive testing at the industry's largest facility.

Platforms

The Vestas 2 MW and 4 MW platforms were introduced in 2000 and 2010, and have now been installed in 48 and 60 countries respectively. Introduced in 2019, the EnVentus platform architecture connects proven system designs from the 2MW, 4MW and 9MW platform turbine technology. The 9MW offshore platform was first introduced in 2014 and has subsequently seen over 7.5 GW of capacity installed. Vestas' flexible product range enables a precise match for site specific conditions.

Servicing the largest turbine fleet in the world

Servicing wind turbines requires industry experience, in-depth knowledge and technical innovation. Our team of over +11,000 service technicians in 71 countries maintain the biggest wind turbine fleet in the world – With 155 GW under service onshore and offshore, including more than 8 GW of non-Vestas turbines – often for the entire duration of their lifetime. And we do so always following the highest quality standards and safety requirements.

The combination of our truly global supply chain and a strong local presence allows us to bring our worldwide wind expertise right to site.

Vestas Türkiye

Vestas entered the Turkish Wind Market in 1998, being amongst the pioneers in the industry during the first foundations of clean and sustainable energy in the country. Since then, the company have installed almost 2.2 GW of wind capacity and have extended its footprint in the last 25 years to establish 4 service and maintenance centers located in İstanbul, Sivas, Adana and Bandırma. The Operation Center in Bandırma was inaugurated in 2018 and acts as a service, training and logistics hub for the technicians working in Türkiye and in other neighboring countries.

Vestas contributes to achievement of Türkiye's renewable energy goals by establishing innovative, efficient and competitive wind farms, along with a focus of production of main components in Türkiye to create domestic added value. Today, the blades, steel towers, generators and tower connecting elements of our wind turbines can be produced by our local suppliers in Türkiye. Vestas is continuously providing know-how, supervisory and educational support to its suppliers in Türkiye for the domestic production. We are proud of the success of our local wind turbine component manufacturers, the export capability and the additional job opportunities created in Türkiye by this way.

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Enerji sektörünün farklı alanlarında faaliyet göstermek amacıyla 1993 yılında temeli atılan Zorlu Enerji küresel ölçekte entegre hizmet sunan bir enerji şirkettir.

Zorlu Enerji şirketleri bünyesinde yer alan ve halka açık tek şirketi olan Zorlu Enerji tarafından yürütülen elektrik ve buhar üretimi ile bunların satışı başta olmak üzere elektrik ticareti, elektrik dağıtımı, solar panel satışı ve kurulumu, doğal gaz ticareti ve dağıtımı, santrallerin inşası ve işletim-bakımı, elektrikli araç şarj istasyonları ağı gibi enerji sektörünün farklı alanlardaki faaliyetleri ile bütünleşmiş bir hizmet karmasına sahiptir.

Güneş enerjisinden elektrikli araçlara, şarj ünitelerinden elektrik santrallerine, proje geliştirmeden işletmeye kadar her alanda enerji çözümleri sunduğu çalışmalar, aşağıdaki faaliyet alanlarında gerçekleşmektedir:

- Elektrik Üretimi
- Elektrik Dağıtımı
- Elektrik Satışı ve Ticareti
- Doğal Gaz Dağıtımı
- Doğal Gaz Ticaret
- Enerji Santralleri Yapımı (Mühendislik, Satın Alma, Yapım - EPC)
- İşletme ve Bakım (O&M)
- Güneş Panelleri Ticareti (Solar)
- Akıllı Sistemler
- Elektrikli Araç Şarj İstasyonları

Yüksek kapasiteli üretim gücü, nitelikli insan kaynağı, dengeli portföyü, kaynak çeşitliliği ve yenilikçi çözümler çerçevesinde sürdürdüğü faaliyetlerini, küresel enerji dönüşümünün kalıcı ve öncü bir parçası olmak amacıyla dijitalleşme alanında odaklanmaktadır.

Established in 1993, Zorlu Enerji is an energy company that aims to operate on different fields of energy sector providing a global scale integrated service.

Zorlu Enerji, which is a subsidiary of Zorlu Enerji companies and the only publicly open company operates on various fields of the sector with an integrated corporate combination including electricity and steam generation and their retail, electricity sales, electricity distribution, solar panel sales and installation, natural gas sales and distribution, construction, management and maintenance of power plants and EV charging stations network.

ON WHAT FIELDS DO WE OPERATE?

Zorlu Enerji operates on various fields of the sector with its experience of 25 years. In our fields of operation, we are combining our well established experience with our corporate values and make a difference among other players of the sector in engineering, supply, construction, management, maintenance and repair.

We are providing alternative energy solutions on every field from solar energy to electricity vehicles, electricity power plants to charging units, from project development to management in fields listed below:

- Electricity Generation
- Electricity Distribution
- Electricity Sales and Trade
- Natural Gas Distribution
- Natural Gas Trade
- Construction Of Power Plants (Engineering, Procurement, Construction - EPC)
- Operation and Maintenance
- Solar Panels Trade
- Smart Systems
- EV Charging Stations

We are utilizing our high capacity production power, qualified human resources, well balanced portfolio, diversity of sources and capability of creating innovative solutions to be a perpetual and leading part of the global energy transformation.

IRENEC

Firmamız ÖZLEM KRİSTAL, 35 yıldan bu yana kristal ödül, plaket ve hediyelik eşya alanında kurumlara ve en prestijli organizasyonlara hizmet vererek kendi sektörünün öncü bir markası olarak faaliyet göstermektedir.

Kurumsal iletişiminizde, ürün ve proje tanıtımlarınızda, toplantı, ziyaret, ağırlama faaliyetlerinizde ihtiyacınız olan size özel tasarımlarımızla en yakın çözüm ortağınız olarak çalışmaktayız.

Teknolojik alt yapımız ve üretim metodlarındaki uzmanlığımız ile başta kristal olmak üzere geniş bir ürün yelpazesi sunmaktayız.

ÖZLEM KRİSTAL specializes in customized crystal and glass recognition awards, business gifts, premiums and promotional products.

We have gained our reputation as being the leader manufacturer of our field since last 35 years with a continuing commitment to innovative techniques, quality and service.

We provide our customers with innovative products and services that will enhance their recognition by combining creative design, multiple types of materials and processes to create personalized awards and gifts for their individual needs in their corporate communications, product launches and special events.

The company has large production facility covering multi layer in-house services include screen printing, laser engraving, etching, full color imprinting and more.

Many types of products are on display in our impressive showroom.

Köklü geçmişi ve kurumsal yapısıyla güvenilir, yenilikçi, öncü ve sektöründe lider bir oyuncu olan Eti, 1961 yılında Eskişehir’de kuruldu.

Kurucumuz Firuz Kanatlı “İnsanlığın mutluluğundan daha yüce bir amaç yoktur” sözü ile Eti’nin kurumsal varoluş amacını ortaya koymuş, kurum kültürü ve değerlerini bu varlık sebebi üzerine inşa etmiştir.

Bugün kurucu vizyonumuz ve kurum değerlerimizi temel alan bir yaklaşımla 7 bini aşkın çalışanımız, 9 üretim tesisimiz, 50 markamız ve 300’den fazla ürünümüzle dünyanın dört bir yanında insanların hayatına dokunuyoruz. Güçlü satış ve ihracat ağımla ülkemizi global pazarlarda başarı ile temsil ediyoruz.

Tüm paydaşlarımız için sürdürülebilir değer yaratma hedefimiz doğrultusunda, Eti’nin ekosisteminde birçok işletmeye ve üreticiye iş, on binlerce kişiye istihdam sağlıyoruz. Toplamda 430 bin metrekaresel alana yayılan ve dünyaya örnek olan tesislerimizde ileri teknolojiyle en yüksek kalitede; bisküvi, kek, çikolata, tuzlu atıştırmalık, gofret, fonksiyonel ve lifli ürünler, kahvaltılık ürünler, dondurulmuş ürünler, soğuk atıştırmalıklar, glütensiz ve bebeklere özel ürünler olmak üzere çok geniş bir yelpazede üretim yapıyoruz. Ar-Ge merkezlerimizin sahip olduğu üstün yetkinlikler sayesinde sektörümüzde standartları belirliyor ve teknoloji yatırımlarımızla öne çıkıyoruz.

Benzersiz lezzetleriyle hayata mutluluk katan kaliteli ve yenilikçi bir dünya markası olma misyonuyla çalışırken mutluluğu sadece ürünlerimizin yaşattığı keyif anları ile sınırlı tutmuyor, toplumsal fayda yaratmayı amaçlayan, çevreye duyarlı ve sağlıklı yaşamın önemine dikkat çeken sosyal sorumluluk projelerimizle hayata değer katıyoruz.

Eti, founded in 1961 in Türkiye, is a reliable, innovative, pioneering and leading player in the food industry with its deep-rooted history and corporate structure.

Our founder Firuz Kanatlı set out the corporate purpose at the establishment stage with his saying, “There is no higher purpose than the happiness of humanity”, and grounded our corporate culture and values on this cause of existence.

Today, empowered by a business approach based on our founding vision and corporate values, we touch the lives of people around the world with than 7,000 employees, 9 manufacturing facilities, 50 brands and more than 300 products. With our robust sales and export network, we successfully operate globally.

In line with our goal to create sustainable value for all our stakeholders, we provide sustenance for various companies and manufacturers within Eti’s eco-system, as well as creating jobs for tens of thousands of people. At our 430,000 square metered facilities that earned global recognition, we manufacture a wide range of high-quality products, including cookies, muffins, chocolate, salty snacks, waffles, functional and fiber products, breakfast foods, frozen products, cold snacks, gluten-free and baby products using advanced technology. Thanks to our highly advanced R&D centers, we are setting standards in the industry and differentiating ourselves from competitors with our investments in technology.

While we are committed to becoming an innovative global brand that creates happiness with our range of tasty products, happiness is not just moments of palate pleasures that our products provide; we add value to people’s lives by initiating social responsibility projects to generate social benefits and raise awareness about the importance of protecting the environment and healthy lifestyle.

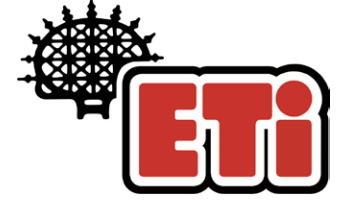
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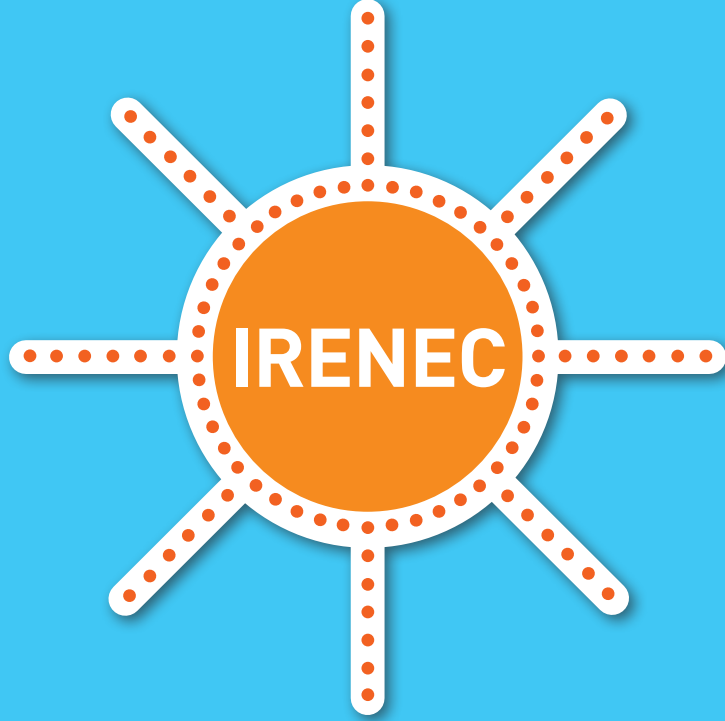
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