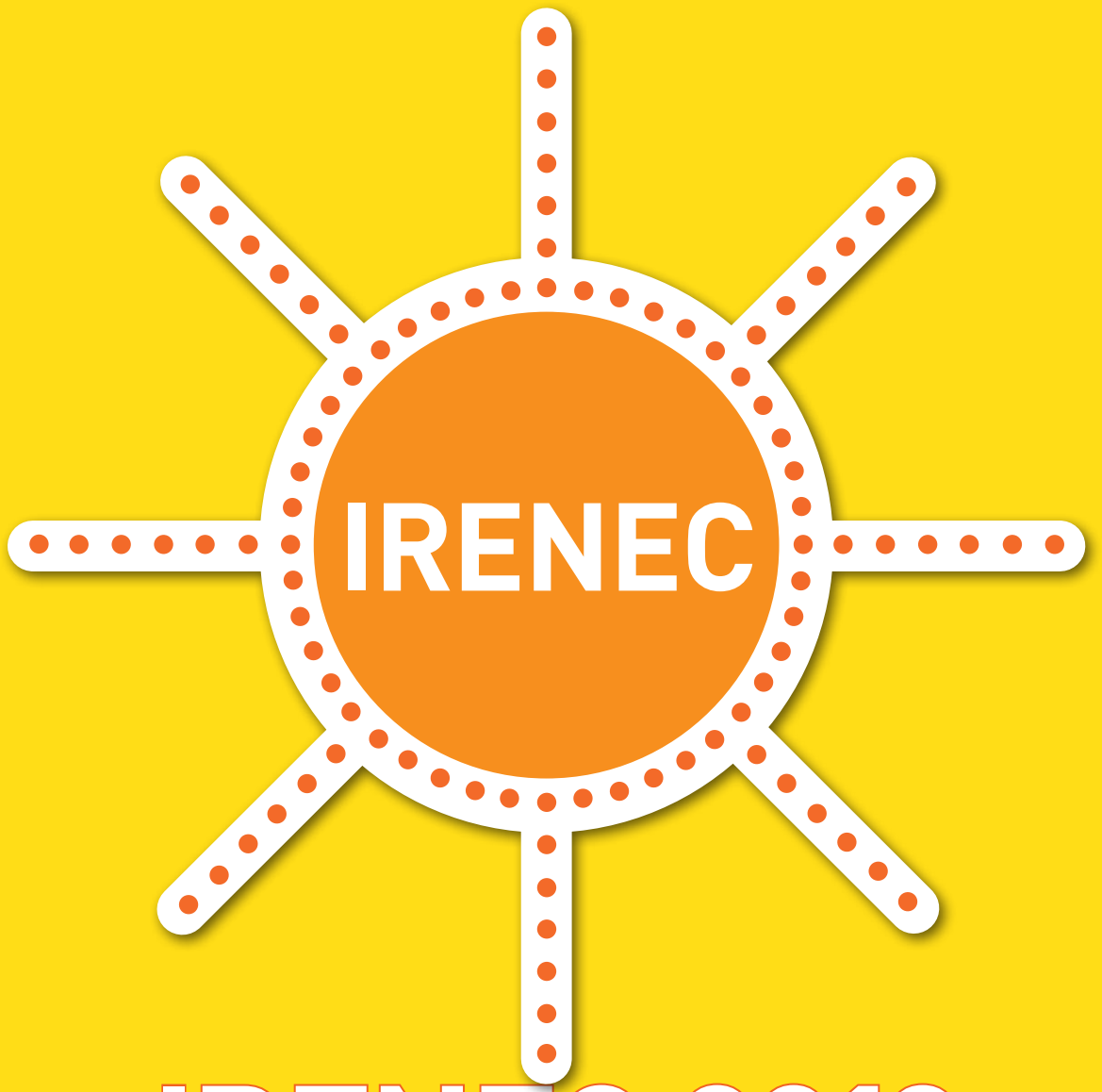

IRENEC 2019

9. ULUSLARARASI %100 YENİLENEBİLİR ENERJİ KONFERANSI

9th INTERNATIONAL 100% RENEWABLE ENERGY CONFERENCE

Yeryüzünde Yenilenebilir Enerji ile Yeni Bir Yaşam Kuruluyor

A New Life is Starting on Earth with the Renewable Energy

24-26 Nisan 2019, April

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9. ULUSLARARASI %100 YENİLENEBİLİR ENERJİ KONFERANSI

Sayın Katılımcılar,

%100 Yenilenebilir Enerjiyi ilerletme yolculuğumuzda, araştırma sonuçlarımızı ve diğer başarılarımızı bir kez daha paylaşacağımız 9. durağa gelmiş bulunuyoruz.

Her gün yenilenebilir enerjilerin taşıdığı kaliteyi keşfediyoruz ve kullanıyoruz. Cin artık şişesinden çıktı. İnsanoğlunun sahip olduğu kaliteyi kullanarak bu fırsatı etkili bir şekilde değerlendirmenin ve hedefe ulaşmanın zamanı geldi. İnsan olmanın getirdiği nitelikler, bireylerin ve ülkelerin birbirleriyle konuşarak sorunları doğru şekilde tanımlamasını ve uygulanabilecek çözümler bulmasını gerektirir.

Atmosferin her köşesinde mevcut olan yenilenebilir enerji kaynakları, ihtiyaç olduğunda elektriğe ve proses ısısına dönüştürülmek üzere hazır bekliyor. Hareket eden havanın kinetik enerjisi, biokütlede depolanan kimyasal enerji, jeotermal kaynaklar ve güneşin ısısı ve ışığı yeryüzünün dört bir yanında, tamamen ücretsiz olarak mevcutlar. Yeryüzündeki yaşam alanının ana enerji kaynağı olarak güneş ve onun türevleri eskiden de mevcuttu, bugün de mevcut ve gelecekte de mevcut olacak.

Yenilenebilir enerjiye küresel olarak sağlanan destek, yenilenebilir kaynakların pazara girmesine olanak sağladı. Bugün rüzgar ve güneş enerjisi, dünyanın pek çok bölgesinde elektrik üretmenin en ucuz yolları haline geldi.

%100 yenilenebilir enerji karmasına ulaşmaya çalışan şehirler ve ülkeler, akıllı şebekelerle ve yenilenebilir enerji depolama sistemleriyle sanayi, ulaşım ve binalar için daha fazla yenilenebilir enerji tedarik edebilmek amacıyla gereken altyapıyı hazırlamaya çalışıyorlar.

Yenilenebilir enerji atmosferimizin her köşesinde mevcut olduğu için Topluluk Enerjisi (yerel halkın bireysel veya kooperatifler ve belediyeler aracılığıyla karar verme sürecine katılması ve kendi enerji üretim tesislerinin sahibi olması) %100 yenilenebilir enerji geleceğine geçiş için en etkili yaklaşım haline geliyor.

IRENEC 2019'da, %100 yenilenebilir enerji toplumlarına geçişle ilgili yaşanan zorluklar, engeller, fırsatlar ve çözümler hakkındaki küresel deneyimleri paylaşıp bunlardan derslerimizi çıkararak %100 Yenilenebilir Enerjiye Küresel Geçişe kendi katkımızı yapacağız.

Saygılarımla,

Tanay Sıdkı Uyar
Konferans Başkanı, IRENEC 2019
Başkan, Türkiye Yenilenebilir Enerji Birliği
(EUROSOLAR Türkiye)

Tanay Sıdkı Uyar

EUROSOLAR Türkiye
Başkanı

YENİLENEBİLİR
ENERJİ BİRLİĞİ

EUROSOLAR
Türkiye

Tanay Sıdkı Uyar

EUROSOLAR Turkey
President

Dear Participants,

In our journey of promoting 100% Renewable Energy, we have arrived the 9th stop where we shall again share our research results and other achievements.

Every day we are discovering and practicing the good quality of renewable energies. The genie is out of the bottle. It is time to use the good quality of human beings to guide this opportunity effectively to the destination. The qualities of human beings can play its role if the individuals and countries talk together and define problems correctly and find solutions that can be implemented.

Renewable energy resources at each corner of the atmosphere are ready to be converted to electricity and process heat locally when needed. Kinetic energy of the moving air, chemical energy stored in biomass, heat and light of the sun and geothermal resources are available all over our planet earth free of charge. As the main energy source of living space on earth, sun and its derivatives were available before, are available today and will be available in the future.

Global support provided for the renewable energy made the market penetration of renewables possible. Today wind and solar energy became the cheapest way of producing electricity in many parts of the World.

Cities and countries who are trying to reach 100% renewable energy mix are working on preparing the infrastructure necessary to be able to supply more renewable energy for industry, transportation and buildings by smart grids and renewable energy storage systems.

Since renewable energy is available at every corner of our atmosphere, Community Power (the involvement of the local people individually or through their cooperatives and municipalities in the decision making process and ownership of their energy production facilities) is becoming the most effective approach for transition to 100% renewable energy future.

During IRENEC 2019 we shall share and learn from the global experiences on difficulties, barriers, opportunities and solutions for transition to 100 % renewable energy societies and make our contribution to Global Transition to 100% Renewable Energy.

Best Regards,

Tanay Sıdkı Uyar
Conference Chair, IRENEC 2019
President, Renewable Energy Association of Turkey
(EUROSOLAR Turkey)

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IRENEC 2019 PROGRAMI

24 Nisan 2019 Çarşamba - Kardelen 1 Salonu			
08.00 - 09.00	**Kayıt**		
09.00 - 10.15	**Açılış Oturumu**		
Oturum Başkanı	Erhan Çakar	Başkan Yardımcısı, EUROSOLAR Türkiye Yenilenebilir Enerji Birliği	
Konuşmacılar	Prof. Dr. Tanay Sıdkı Uyar	Başkan, EUROSOLAR Türkiye Yenilenebilir Enerji Birliği	
	Ahmet Tohma	Proje Finans Yöneticisi, Garanti Bankası	Yenilenebilir Enerjinin Finansmanı
	Gazi İpek	Yönetim Kurulu Başkanı, Elektrik Mühendisleri Odası	
	Dr. Wolfgang Palz	EU Görevlisi (emekli), Avrupa'da Yenilenebilir Enerjinin Gelişimi Bölümü Eski Başkanı	
	Prof. Dr. Bülent Ekici	Marmara Üniversitesi, Fen Bilimleri Enstitüsü Müdürü	
	Ali Kılıç	Maltepe Belediye Başkanı	
10.15 - 10.30	**Çay ve Kahve Molası**		
10.30 - 12.30	**Yenilenebilir Enerji Sektörü Özel Oturumu - 100% Yenilenebilir Enerji için Yenilenebilir Enerji Senfonisi**		
Oturum Başkanı	Prof. Dr. Tanay Sıdkı Uyar	Başkan, EUROSOLAR Türkiye Yenilenebilir Enerji Birliği	
Konuşmacılar	Ali Kındap	Başkan, JESDER, Jeotermal Elektrik Santral Yatırımcıları Derneği	
	Hakan Erkan	Genel Sekreter, GENSED, Güneş Enerjisi Sanayicileri ve Endüstrisi Derneği	
	Sedat Akar	Başkan Yardımcısı, BIYODER Biyoenerji Derneği	Bitkisel ve Hayvansal Atıklardan Enerji Üretimi
	Kutay Kaleli	Başkan, GÜNDER, Uluslararası Güneş Enerjisi Topluluğu Türkiye Bölümü	
	Mehmet Kapusuz	Başkan Yardımcısı, GÜYAD, Güneş Enerjisi Yatırımcıları Derneği	Türkiye'de Güneş Enerjisi Güncel Durum ve Etkin İş Modelleri Çerçevesinde Gelecek Beklentileri
	Güray Erol	Genel Sekreter, TÜREB, Türkiye Rüzgar Enerjisi Birliği	
12.30 - 13.00	**Tema Konuşmacıları**		
Konuşmacı	Dr. Wolfgang Palz	EU Görevlisi (emekli), Avrupa'da Yenilenebilir Enerjinin Gelişimi Bölümü Eski Başkanı	Güneşin Zaferi (Triumph of The Sun: The Energy of The New Century)
13.00 - 13.45	**Yemek Molası**		
13.45 - 15.00	**Rüzgar Enerjisinde Yeni Ufuklar**		
Oturum Başkanı	Prof. Dr. Tanay Sıdkı Uyar	Başkan, EUROSOLAR Türkiye Yenilenebilir Enerji Birliği	
Konuşmacılar	Uğur Işık	RES Anatolia Holding A.Ş. Proje Geliştirme Müdürü	RES Sektöründe Sürdürülebilirlik
	Levent İshak	Vestas Türkiye Servis Direktörü	Rüzgar Endüstrisinde Yeni Teknolojiler
	Erol Demirer	Demirer Holding Yönetim Kurulu Başkanı	
15.00 - 16.00	**Tema Konuşmaları**		
Konuşmacılar	Dr. Osman Benchikh	Enerji Programı Eski Başkanı – UNESCO	
	Prof. Dr. Tanay Sıdkı Uyar	Başkan, EUROSOLAR Türkiye Yenilenebilir Enerji Birliği	Şehirlerin Topluluk Enerjisi ile 100% Yenilenebilir Enerjiye Geçişi
16.00 - 16.15	**Çay ve Kahve Molası**		
16.15 - 17.15	**TÜRÇEP Türkiye Çevre Platformu Özel Oturumu - Konvansiyonel Enerji Kullanımının Toplumsal Maliyetleri**		
Oturum Başkanı	Oktay Demirkan	Genel Sekreter, TÜRÇEP Türkiye Çevre Platformu	% 100 Yenilenebilir Enerjiye Geçişte Sivil Toplum
Konuşmacılar	Ekrem Akgül	İDA Dayanışma Derneği, Çanakkale	
	Ali Kalçık	Van Çevre Derneği, Doğu Anadolu Çevre Platformu	
	Sadık Yurtman	Eskişehir Çevre Koruma ve Geliştirme Derneği, İç Anadolu Çevre Platformu	Eskişehir Alpu Termik Santrali

9. ULUSLARARASI %100 YENİLENEBİLİR ENERJİ KONFERANSI

IRENEC 2019 PROGRAM

24 April 2019 Wednesday - Kardelen 1 Hall			
08.00 - 09.00	**Registrations**		
09.00 - 10.15	**Opening Session**		
Session Chair	Erhan Çakar	Vice President, EUROSOLAR Turkey Renewable Energy Association	
Speakers	Prof. Dr. Tanay Sıdkı Uyar	President, EUROSOLAR Turkey Renewable Energy Association	
	Ahmet Tohma	Project Finance Manager, Garanti Bank	Financing Renewable Energy
	Gazi İpek	Chairman, Chamber of Electrical Engineers	
	Dr. Wolfgang Palz	EU Official (ret), Head of Renewable Energies Development in Europe, Paris	
	Prof. Dr. Bülent Ekici	Marmara University, Director of Institute of Pure and Applied Sciences	
	Ali Kılıç	Mayor of Maltepe Municipality	
10.15 - 10.30	**Tea and Coffee Break**		
10.30 - 12.30	**Renewable Energy Industry - Renewable Energy Symphony for 100% Renewable Energy**		
Session Chair	Prof. Dr. Tanay Sıdkı Uyar	President, EUROSOLAR Renewable Energy Association of Turkey	
Speakers	Ali Kındap	President, JESDER Geothermal Power Plant Investors Association	
	Hakan Erkan	General Secretary, GENSED Turkish Solar Energy Industry Association	
	Sedat Akar	Vice President, BIYODER Bioenergy Association	Energy Production From Agricultural and Animal Waste
	Kutay Kaleli	President, GÜNDER, International Solar Energy Community Turkey	
	Mehmet Kapusuz	Vice President, GÜYAD, Solar Energy Investors Association	Future Expectations of Solar Energy in Turkey in Light of Effective Business Models
	Güray Erol	General Secretary, TÜREB, Turkish Wind Energy Association	
12.30 - 13.00	**Keynote Speaker**		
Speaker	Dr. Wolfgang Palz	EU Official (ret), Head of Renewable Energies Development in Europe, Paris	Triumph of The Sun: The Energy of The New Century
13.00 - 13.45	**Lunch**		
13.45 - 15.00	**EUROSOLAR Turkey Special Session - New Horizons for Wind Energy**		
Session Chair	Prof. Dr. Tanay Sıdkı Uyar	President, EUROSOLAR Renewable Energy Association of Turkey	
Speakers	Uğur Işık	Project Development Manager, RES Anatolia Holding A.Ş.	Sustainability in RES Industry
	Levent İshak	Service Manager, Vestas Turkey	New Technologies in Wind Industry
	Erol Demirer	Chairman, Demirer Holding	
15.00 - 16.00	**Keynote Speakers**		
Speakers	Dr. Osman Benchikh	Ex-Head of Energy Programme – UNESCO	
	Prof. Dr. Tanay Sıdkı Uyar	President, EUROSOLAR Renewable Energy Association of Turkey	Community Power Based Transition of Cities to 100% Renewable Energy
16.00 - 16.15	**Tea and Coffee Break**		
16.15 - 17.15	**TÜRÇEP Environmental NGO's Platform of Turkey Special Session**		
Session Chair	Oktay Demirkan	General Secretary, TÜRÇEP Environmental NGO's Platform of Turkey	Civil Society, Transition to 100% Renewable Energy
Speakers	Ekrem Akgül	IDA Solidarity Association, Çanakkale	
	Ali Kalçık	Van Environment Platform, Eastern Anatolia Environment Platform	
	Sadık Yurtman	Eskişehir Environment Protection Association, Anatolia Environment Platform	Eskişehir Alpu Thermal Power Plant

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9. ULUSLARARASI %100 YENİLENEBİLİR ENERJİ KONFERANSI

IRENEC

25 Nisan 2019 Perşembe - Kardelen 1 Salonu

09.00 - 10.15	**Konferans Sunumları - 1**		
Oturum Başkanı	Dr. Ahmet Erkoç	Doktor Öğretim Üyesi, Endüstri Mühendisliği Bölüm Başkanı, Haliç Üniversitesi	
Konuşmacılar	Dr. Kenan Saka	Makina Mühendisi, Bursa Uludağ Üniversitesi	Bursa'da solar panele dayalı hidrojen üretim kapasitesi
	Dr. Huseyin Kahraman	Makina Mühendisi, Sakarya Üniversitesi	Proton değişimli membran yakıt pilinde conta, uç plakası ve akım kolektörü analizi ve modellemesi
	Salih Güvenç Uslu	Makina Mühendisi, Marmara Üniversitesi	Bir konutun sıfır enerjili binaya dönüşümü
	Mohamed Ali Basyooni	Nano Bilim ve Nano Mühendislik Bölümü, Fen Bilimleri Enstitüsü, Konya Üniversitesi	Hidrojen Üretimi İçin Nano Gözenekli Anodik Alüminyum Oksit Şablonuna Dayalı Tio2 / Tioxny Mantar Benzeri Nanokompozit Sentezi
	Emine Meşe	Fizik Mühendisi, Durham Üniversitesi	Cihaz Verimliliğinde Morfoloji İlişkisi için Teorik Modelleme
10.15 - 10.45	**Tema Konuşmacısı**		
Konuşmacı	Prof. Dr. Şener Oktik	Araştırma ve Teknoloji Geliştirme Başkanı, Şişecam	Kristalli Silisyum Dilim Tabanlı Fotovoltaik Modüllerin Ömür Döngülerindeki Genel Arızaların Kısa Değerlendirilmesi
10.45 - 11.00	**Çay ve Kahve Molası**		
11.00- 11.30	**Tema Konuşmacısı**		
Konuşmacı	Rian Van Staden	Platform Kordinatorü, Küresel %100 Yenilenebilir Enerji Platformu	Küresel %100 Yenilenebilir Enerji Platformu
11.30 - 12.30	**BİYODER Biyoenerji Derneği Özel Oturumu - Türkiye'de Biyoenerji**		
Oturum Başkanı	Prof. Dr. Tanay Sıdkı Uyar	Başkan, EUROSOLAR Türkiye Yenilenebilir Enerji Birliği	
Konuşmacılar	Mehmet Ali Nalçacıoğlu	Baş Teknoloji Sorumlusu, Hexagon Katı Atık A.Ş. / BİYODER Saymanı	Sıfır Atık & Entegre Katı Atık Yönetimi
	Özgür Can Bahçeci	Çevre Mühendisi, Biyogaz Hochreiter A.Ş.	Tarım, Hayvancılık ve Gıda Atıkları için Biyogaz Tesisleri
	Özcan Özgür	Genel Müdür, ISP Uluslararası Yüzey Koruma Slovakya	Kentsel Katı Atık için İleri Teknoloji : Sıfır Atık için Depolimerizasyon ve Fermentasyon Kombinasyonu
12.30 - 13.00	**Yemek Molası**		
13.00 - 14.30	**Topluluk Enerjisi Atölyesi (Diyarbakır, Van, Çanakkale, Burdur Kentleri Örneği)**		
14.30 - 16.00	**Enerji Karar Destek Modelleri ve Uygulamalar**		
Oturum Başkanı	Dr. Egemen Sulukan	Öğretim Üyesi, Milli Savunma Üniversitesi, Deniz Harp Okulu	
Konuşmacılar	Doğancan Beşikci	Makine Mühendisi, Marmara Üniversitesi	Biyogazdan Elektrik Üretimine Dair Potansiyel Analizi: Burdur Vaka Analizi
	Alperen Sarı	Makine Mühendisi, Milli Savunma Üniversitesi, Barbaros Deniz Bilimleri ve Mühendisliği Enstitüsü	İklim değişikliği ile mücadele kapsamında deniz filolarında düşük karbonlu bir geleceğe geçiş
	Salih Korhan Zorlu	Gemi İnşa ve Gemi Makineleri Mühendisi, Milli Savunma Üniversitesi, Barbaros Deniz Bilimleri ve Mühendisliği Enstitüsü	Konutlar için enerji simülasyon aracı tasarımı
	Utku Köker	Endüstri Yüksek Mühendisi, Süleyman Demirel Üniversitesi	Kent ölçeğinde simülasyon yaklaşımı ile seviyelendirilmiş elektrik maliyeti hesaplanması
16.00 - 16.15	**Çay ve Kahve Molası**		
16.15 - 17.15	**Türkiye'de Yenilenebilir Enerjiden Elektrik Üretimi ve Uygulamaları**		
Oturum Başkanı	Dr. Egemen Sulukan	Makine Mühendisliği Bölümü, Milli Savunma Üniversitesi, Deniz Harp Okulu	
Konuşmacılar	Doğa Baydur	İş Geliştirme Müdürü, Res Anatolia Holding	Yenilenebilir Enerjide Nasıl Daha İyi Bir Yatırım Ortamı Yaratılabilir
	Haluk Sayar	Kurucu Üye, EUROSOLAR Kurucu Üye, AVERE Genel Koordinatörü	Türkiye ve Dünyada Elektromobilitenin Yakın Geleceği
	Yılmaz Dağtekin	Uzman, TC Sanayi ve Teknoloji Bakanlığı Güneydoğu Anadolu Projesi	Güneydoğu Anadolu Bölgesi'nde Yenilenebilir Enerji Kaynaklarının Kullanımı
17.15 - 18.15	**Tema Konuşmacıları**		
Konuşmacılar	Mohammad Naeem Qureshi	Şef Editor, Energy Update	Dünya'da %100 Yenilenebilir Enerjiye Geçişte Medyanın Rolü: Pakistan İncelemesi
	Mohammad Al Taani	Genel Sekreter, AREC Arap Yenilenebilir Enerji Komisyonu	Dördüncü Enerji Jenerasyonu ve Yapay Zekanın Dünya'daki Sürdürülebilirliğe Girişi

9th INTERNATIONAL 100% RENEWABLE ENERGY CONFERENCE

IRENEC

25 April 2019 Thursday - Kardelen 1 Hall

09.00 - 10.15	**Conference Papers - 1**		
Session Chair	Dr. Ahmet Erkoç	Academic Member, Head of Industrial Engineering Faculty, Haliç University	
Speakers	Dr. Kenan Saka	Mechanical Engineer, Bursa Uludağ University	An investigation on hydrogen production capacity of a PV power plant in Bursa, Turkey
	Dr. Huseyin Kahraman	Mechanical Engineer, Sakarya University	Analysis and Modeling of Gaskets, End Plates and Current Collectors in a Proton Exchange Membrane Fuel Cell
	Salih Güvenç Uslu	Mechanical Engineer, Marmara University	The Conversion Of A Residential Building Into A Net Zero Energy Building
	Mohamed Ali Basyooni	Department of Nano Science and Nano Engineering, Institute of Science and Technology, University of Konya	The Synthesis of Tio2/Tioxny Mushrooms-Like Nanocomposites Based On Nanoporous Anodic Aluminum Oxide Template For Hydrogen Generation
	Dr. Emine Meşe	Physics Engineer, University of Durham	Theoretical Model to Relate Morphology to Device Efficiency
10.15 - 10.45	**Keynote Speaker**		
Speaker	Prof. Dr. Şener Oktik	President of Research & Technological Development of Şişecam	A Brief Review of Common Failures Through A Life Cycle of Water-Based Crystalline Photvoltaic Modules
10.45 - 11.00	**Tea and Coffee Break**		
11.00- 11.30	**Keynote Speaker**		
Speaker	Rian Van Staden	Platform Coordinator, Global 100% Renewable Energy Platform	Global 100% Renewable Energy Platform
11.30 - 12.30	**BIYODER Bioenergy Association - Bioenergy in Turkey**		
Session Chair	Prof. Dr. Tanay Sıdkı Uyar	President, EUROSOLAR Renewable Energy Association of Turkey	
Speakers	Mehmet Ali Nalçacıoğlu	Chief Technology Officer, Hexagon Katı Atık A.Ş. / BİYODER Treasurer	Zero Waste & Integrated Solid Waste Management
	Özgür Can Bahçeci	Environmental Engineer, Biyogaz Hochreiter A.Ş.	Biogas Plants For Agriculture, Livestock And Food Wastes
	Özcan Özgür	General Manager, International Surface Protection	Advanced Technology for Municipal Solid Waste: Low Temperature Depolymerization and Fermentation Combination for Zero-Waste
12.30 - 13.00	**Lunch**		
13.00 - 14.30	**Community Power Workshop (Diyarbakır, Van, Çanakkale, Burdur City Examples)**		
14.30 - 16.00	**Energy Decision Support Systems and Applications**		
Session Chair	Dr. Egemen Sulukan	Faculty Member, National Defense University, Turkish Naval Academy	
Speakers	Doğancan Beşikci	Mechanical Engineer, Marmara University	An Urban Biogas to Electricity Potential Analysis: Case Study of Burdur
	Alperen Sarı	Mechanical Engineer, National Defense University, Barbaros Institute of Marine Sciences and Engineering	Transition to a Low Carbon Future in Maritime Fleet for Climate Change
	Salih Korhan Zorlu	Naval Architect and Marine Engineer, National Defense University, Barbaros Institute of Marine Sciences and Engineering	A Residential Energy Simulation Tool Design
	Utku Köker	PhD Candidate, Süleyman Demirel University	Calculating the Levelized Cost of Electricity by an Urban Scale Simulation Approach
16.00 - 16.15	**Tea and Coffee Break**		
16.15 - 17.15	**Renewable Energy Based Electricity Generation and Applications in Turkey**		
Session Chair	Dr. Egemen Sulukan	Mechanical Engineering Department, National Defense University, Turkish Naval Academy	
Speakers	Doğa Baydur	Business Development Manager, RES Anatolia Holding	
	Haluk Sayar	Founder Member, EUROSOLAR Turkey	Near Future of Electromobility
	Yılmaz Dağtekin	Speacialist, Turkish Ministry of Industry and Technology, The South-eastern Anatolia Project	
17.15 - 18.15	**Keynote Speakers**		
Speakers	Mohammad Naeem Qureshi	Managing Editor, Energy Update	The Role Of Media For Global Transition To 100% Renewable Energy, Case Study In Pakistan
	Mohammad Al Taani	General Secretary, AREC Arab Renewable Energy Commission	The Fourth Energy Generation and Artificial Intelligence in the Entrance for Sustainability in The World

9. ULUSLARARASI %100 YENİLENEBİLİR ENERJİ KONFERANSI

26 Nisan 2019 Cuma - Kardelen 1 Salonu

09.00 - 10.30	**Konferans Sunumları - 2**		
Oturum Başkanı	Anıl Türkünoğlu	Genel Sekreter, EUROSOLAR Türkiye Yenilenebilir Enerji Birliği	
Konuşmacılar	Gizem Ersoy	Elektrik Elektronik Mühendisi, Marmara Üniversitesi	Marmara Üniversitesi için rüzgar santrali dizaynı
	Emre Leblebicioğlu	Enerji Sistemleri ve Mekatronik Mühendisi, Marmara Üniversitesi	Kullanıcı odaklı şebekeden bağımsız solar enerji sistemi dizaynı ve maaliyeti
	Dr. B. Özge Şerifoğlu Akyürek	Makine ve Uzay Mühendisliği, California Üniversitesi	
	Reyhane Doğan	Mekatronik Mühendisi, Erciyes Üniversitesi	Kısmi yükte bir SI Motorda Performans ve Etanol-Asetilen Karışımının Emisyon Parametrelerinin İncelenmesi
	Arcell Lelo Konde	Petrol Mühendisi, Kıbrıs Üniversitesi	Kinşasa Eyaletindeki Güç Sektörünün 2050 Yılında %100 Yenilenebilir Elektrik Vizyonuna Ulaşması için Yerelleştirilmesi
	Alper Saydam	Makine Mühendisi, Marmara Üniversitesi	Yenilenebilir Enerji Kaynaklarının Şehir Enerji Sistemine Entegrasyonu
10.30 - 11.30	**TC Çevre ve Şehircilik Bakanlığı Özel Oturumu - İklim ve Uyum Çalışmaları**		
Konuşmacılar	Dr. B. Özge Şerifoğlu Akyürek	İklim Değişikliğine Uyum Dairesi Başkanlığı	İklim Değişikliğine Uyum ve Türkiye için Yürütülen Çalışmalar
	Neslihan Ağartan	İklim Değişikliği Dairesi Başkanlığı	İklim Değişikliğine Sebep Olan Sera Gazı Emisyonları ve Bunların Kontrolüne İlişkin Çalışmalar
11.30 - 11.45	**Çay ve Kahve Molası**		
11.45 - 12.15	**Tema Konuşması**		
Konuşmacı	Prof. Dr. Hasan Heperkan	Dekan, İstanbul Aydın Üniversitesi Mühendislik Fakültesi	Akıllı Binalarda Enerji Verimliliği Teknolojileri
12.15 - 13.00	**Tema Konuşması**		
Konuşmacı	Prof. Dr. İbrahim Dinçer	Ontario Üniversitesi, Teknoloji Enstitüsü, Uygulamalı Bilim ve Mühendislik Fakültesi, Kanada	Yenilenebilir Enerji Depolama Sistemleri
13.00 - 13.45	**Yemek Molası**		
13.45 - 14.15	**Tema Konuşması**		
Konuşmacı	Dr. Canan Acar	Öğretim Üyesi, Bahçeşehir Üniversitesi	Güneş Hidrojen Üretim Seçenekleri Kapsamlı Sürdürülebilirlik Araştırması
14.15 - 16.15	**Kapanış Oturumu - IRENEC 2018 değerlendirme ve IRENEC 2019 için öneriler**		
Oturum Başkanı	Prof. Dr. Tanay Sıdkı Uyar	Başkan, EUROSOLAR Türkiye Yenilenebilir Enerji Birliği	
Konuşmacılar	Alper Saydam	Makine Mühendisi, IRENEC Bilim Komitesi Üyesi	
	Doğancan Beşikci	Makine Mühendisi, IRENEC Bilim Komitesi Üyesi	

9th INTERNATIONAL 100% RENEWABLE ENERGY CONFERENCE

26 April 2019 Friday - Kardelen 1 Hall

09.00 - 10.30	**Conference Papers - 2**		
Session Chair	Anıl Türkünoğlu	General Secretary, EUROSOLAR Renewable Energy Association of Turkey	
Speakers	Gizem Ersoy	Electrical Engineer, Marmara University	Designing Onshore Wind Farm For Marmara University Following The Global Experience
	Emre Leblebicioğlu	Energy Systems and Mechatronic Engineer, Marmara University	User-Focused Designing And Pricing An Off-Grid Photovoltaic Solar Energy System
	Dr. B. Özge Şerifoğlu Akyürek	Mechanical and Aerospace Engineer, University of California	Solar Forecasting Closed-Form Analytic Solution of Cloud Dissipation for a Mixed-Layer Model
	Reyhane Doğan	Mechatronic Engineer, Erciyes University	Investigation of Engine Performance and Emission Parameters of Ethanol-Acetylene Mixture in an SI Engine at Partial Load
	Arcell Lelo Konde	Petrolium Engineer, Cyprus University	Decentralization Of The Power Sector In The City-Province Of Kinshasa For Achieving The Vision 100% Renewable Electricity By 2050
	Alper Saydam	Mechanical Engineer, Marmara University	Integration of Renewable Energy Sources to Urban Energy Grid
10.30 - 11.30	**Ministry of Environment and Urban Planning Special Session - Climate and Adaptation Studies**		
Speakers	Dr. B. Özge Şerifoğlu Akyürek	Department of Adaptation to Climate Change	Climate Change and Adaptation Studies
	Neslihan Ağartan	Department of Climate Change	Causes of Climate Change, Attemps to Pacificate and Studies on The Subject
11.30 - 11.45	**Tea and Coffee Break**		
11.45 - 12.15	**Keynote Speaker**		
Speaker	Prof. Dr. Hasan Heperkan	Dean, Aydın University Engineering Faculty	Energy Efficiency Technologies in Smart Buildings
12.15 - 13.00	**Keynote Speaker**		
Speaker	Prof. Dr. İbrahim Dinçer	University of Ontario Institute of Technology, Faculty of Engineering and Applied Science Canada	Energy Storage Systems for Renewables
13.00 - 13.45	**Lunch**		
13.45 - 14.15	**Keynote Speaker**		
Speaker	Dr. Canan Acar	Assistant Professor, Bahçeşehir University	A Comprehensive Sustainability Investigation of Solar Hydrogen Production Options
14.15 - 16.15	**Closing Session - IRENEC 2019 review and IRENEC 2020 suggestions**		
Session Chair	Prof. Dr. Tanay Sıdkı Uyar	President, EUROSOLAR Renewable Energy Association of Turkey	
Speakers	Alper Saydam	Mechanical Engineer, IRENEC Scientific Committee Member	
	Doğancan Beşikci	Mechanical Engineer, IRENEC Scientific Committee Member	

9. ULUSLARARASI %100 YENİLENEBİLİR ENERJİ KONFERANSI

Konferans Eş Başkanları / Conference Co-Chairs

Prof. Dr. İbrahim Dinçer	University of Ontario Institute of Technology, Faculty of Engineering and Applied Science Canada
Remigijus Lapinskas	President of World Bioenergy Association
Dr. Wolfgang Palz	EU Commission Official (ret.)

Bilimsel Danışma Komitesi / Scientific Advisory Committee

Assoc. Prof. Ahmad F. Houri	Natural Science Division, Lebanese American University, Lebanon
Eng. Árni Ragnarsson	Iceland GeoSurvey, Iceland
Prof. Dr. İbrahim Dinçer	University of Ontario Institute of Technology, Faculty of Engineering and Applied Science Canada
Prof. Dr. İlhami Yıldız	Dalhousie University, Canada
Dr. Egemen Sulukan	National Defense University, Turkish Naval Academy
Dr. Mustafa Sağlam	Marmara University, Turkey
Osman Benchikh	EX-Head of Energy Programme – UNESCO

9th INTERNATIONAL 100% RENEWABLE ENERGY CONFERENCE

IRENEC 2020

10. ULUSLARARASI %100 YENİLENEBİLİR ENERJİ KONFERANSI

15-17 NİSAN 2020

- Dünyada ve ülkemizdeki yenilenebilir enerji konusundaki uygulamalar, teknolojik gelişmeler hakkında bilgi almak için,
- Kentlerde ve ülkelerde yenilenebilir enerjiye geçiş süreçlerini belirlemek için,
- Ülkemizde yenilenebilir enerjiye geçişin sorunlarını ve çözüm önerilerini tartışacağımız atölye çalışmalarına katılmak için,
- Konferansın sonuçlarını hayata geçirmek üzere iş birliği yapmak için,
- Topluluk Enerjisi esasına dayanılarak %100 yenilenebilir enerjiye küresel geçiş için bireylerin, karar vericilerin, akademik kuruluşların, kooperatiflerin ve yerel yönetimlerin üzerine düşen görevler ve sorumlulukları tespit etmek için,

15-17 Nisan 2020 tarihlerinde birlikte olalım

YENİLENEBİLİR ENERJİ BİRLİĞİ

EUROSOLAR Türkiye

www.irenec.org • www.eurosolar.org.tr • www.poweringcommunities.org

IRENEC 2020

10TH INTERNATIONAL 100% RENEWABLE ENERGY CONFERENCE

15-17 APRIL 2020

- get informed about the global and local implementations and technologic developments in the field of the renewable energy.
- to set the roadmap for the transition to renewable energy in cities and countries.
- join the workshops where we will discuss the challenges and solutions about the transition to renewable energy in our country.
- cooperate in order to adopt the conference results into real life.
- identify the roles and responsibilities of the individuals, decision makers, academic institutions, cooperatives and local authorities in the global transition to 100% renewable energy on the basis of community power principle.

Let's be together on April 15-17, 2020

RENEWABLE ENERGY ASSOCIATION

EUROSOLAR Turkey

www.irenec.org • www.eurosolar.org.tr • www.poweringcommunities.org

15:00 - 16:00 KARDELEN 1 / 24 APRIL / ABSTRACTS

Dr. Osman Benchikh

Sustainable development underlines the need to manage energy resources judiciously; on the other hand, no development can occur without access to basic energy services. Access to energy is required in all economic and social sectors, and inequality in capacity to access energy resources, and to utilise such resources for development purposes, results in further inequality in wealth distribution, be it in terms of social welfare or economic competitiveness.
It is to be recalled that, globally over 1.3 billion people still remain without electricity access and more than 95% of them are either in Africa or Asia. Recognizing that access to energy services in developing countries is essential for the achievement of the Sustainable Development Goals, which would help to reduce poverty, several initiatives including within the UN have been launched in order to address a sustainable and reliable access to energy for all.
Responding to the energy challenges requires the diversification of energy sources. It also calls for building a knowledge base, disseminating relevant technical and scientific knowledge, and promoting appropriate energy policies and choices as a foundation for increased use and application of the various environmentally sound energy technologies.

09:00 - 10:15 KARDELEN 1 / 25 APRIL / ABSTRACTS

An investigation on hydrogen production capacity of a PV power plant in Bursa, Turkey

Kenan SAKA

Hydrogen utilizationas an energy carrier is expected to increase in the future. However, it does not exist in nature in its elemental form so it must be produced from water using various energy sources. Renewable energy sources such as solar are the best option for clean and sustainable hydrogen production. Soğuksu photovoltaic solar power plant is the first large scale power plant with 7 MW peak capacity andlocated in Bursa, Turkey. In this study, hydrogen production capacity of the power plant is evaluated. Daily, monthly and annual electricity generation values of Soğuksu photovoltaic solar power plant were recorded under actual operating conditionsin the data library of the power plant. These values have been used here to investigate hydrogen production from Proton Exchange Membrane (PEM) electrolyzer. Results show that the maximum mass flow of hydrogen production is 0.0625 kgs-1H2 at peak load. Also, total annual electricity generation of the power plant is 10.7 GWh that result in an annual hydrogen production of 344 tons.

Analysis and Modeling of Gaskets, End Plates and Current Collectors in a Proton Exchange Membrane Fuel Cell

Kenan Saka[1] Mehmet F. Orhan[2] and Huseyin Kahraman[3]

A single proton exchange membrane (PEM) fuel cell is composed of several components such as gaskets, end plates and current collectors. These crucial components should be modeled and diagnosed properly for a higher overall efficiency. The gasket is very essential for the cell as a barrier to leakages. Also, the end plates assure a uniform distribution of clamping pressure along all the components. On the other hand, the current collectors can be made of various materials and should carefully be selected. In this study, a model for the gaskets, end plates and current collectors has been created in terms of heat conduction. A nodal analysis has been used to evaluate the variation in temperature due to heat conduction of different end plate materials and gasket thicknesses. The current collector materials and their impact to the cell performance have also been investigated. The results show that as the hard rubber gasket layer thickness increases, the temperature takes longer time to reach a steady state. The current collector plates made of grafiol show the best performance at various current density loads

The Conversion Of A Residential Building Into A Net Zero Energy Building

M.Sc. Salih Güvenç Uslu[1], Prof. Dr. Tanay Sıdkı Uyar[2]

Zero energy building concept has gained popularity significantly in the decade due to the enhanced greenhouse effect and the stringent regulations which aim at reducing greenhouse gas emissions. The 2-floor-house, which has been intended converting into a net zero energy building in this study, has needed to be improved from structural point of view and the conversion has required onsite electricity generation. For this purpose, several photovoltaics panels has been mounted on the external walls and on the roof, the indoor insulation has been strengthened with the new heated internal floors. The whole HVAC system and the domestic hot water system has been changed. The HVAC system involves a condenser loop including a ground heat exchanger, both a hot water and a chilled water loops with two ground source heat pumps, an air loop including an air handling unit. The study has taken into account two cases which differ from each other by the photovoltaics panels. The case which involves the panels has met the requirements of the conversion. The net source energy in this case has turned out to be below zero with the improved passive housing performance. Consequently, the energy efficiency has been enhanced and sufficient electricity has been exported. The modelling, heating and cooling design calculations, one-year-thermal-simulations has been performed on DesignBuilder software which provides a user interface to EnergyPlus. In addition to the dynamic thermal simulations provided by EnergyPlus V8.6.0.001, Radiance software has been utilized for daylighting textures. The illumination maps have demonstrated that there are zones whose natural light levels should be improved. Finally, the study has been concluded with a steady-state, isothermal external computational fluid dynamics, CFD, analysis. The study as a whole has provided a wide outlook over zero energy building concept. It could be enriched with a cost analysis including local component prices and an optimization study that aims at minimizing carbon dioxide emissions and discomfort.

KARDELEN 1 / 25 APRIL / ABSTRACTS 09:00 - 10:15

The synthesis of TiO_2/TiO_xN_y mushrooms-like nanocomposites based on nanoporous anodic aluminum oxide template for hydrogen generation

Mohamed Rabia[1], Mohamed A. Basyooni[2] Sodky H. AboLaila[3], Huaping Zhou[4], Mohamed Shaban[1], Yong Lei*[1], Ashour M. Ahmed[1]

TiO2/TiOxNy hollow mushrooms-like nanocomposite photocatalyst was prepared using atomic layer deposition (ALD) and reactive direct current magnetron sput-tering, respectively. The preparation process depends on the aluminum oxide template (AOT) that was fabricated using the two-step anodization process after the Ni imprinting process. The chemical, morphological, and optical properties were recorded using different analyses such as XRD, SEM, EDX, and UV-Vis. From the SEM analyses, the AOT pore size increases from 177 to 305 nm after the pore widening process in H3PO4. The diameter of the TiO2 in the upper part is 352 nm, while the diameter of the TiO2/TiOxNy composite is 355 nm in the up-per part. The estimated band gap values of TiO2 and TiO2/ TiOxNy are 3.1 and 2.25 eV, respectively. From the values of band gaps, there is a clear enhancement in the optical absorption of the nanocomposite bilayers. The photoelectrochemical (PEC) behaviors of the TiO2/TiOxNy electrodes supported in Au/Ni metal thin film was measured in 1M NaOH as scarifying reagent. The thermodynamic pa-rameters were calculated, in which ΔE, ΔH*, and ΔS* values are 16.75 kJmol-1, -15.87 kJmol-1 and 115.65 kJmol-1K-1, respectively.

Theoretical Model to Relate Morphology to Device Efficiency

Emine Meşe[1,2], Nigel Clarke[1,3]

We have developed a computationally efficient method for modelling PV device, based on a mesoscopic drift-diffusion model, in 3D microstructures. It includes the photoactive layer modelling which is based on numerically generated morphologies. Polymer blend microstructures are generated using the Cahn-Hilliard model. The combined morphology/device performance modelling are then explored in a systematic way.

KARDELEN 1 / 25 APRIL / ABSTRACTS 11:30 - 12:30

Advanced Technology for Municipal Solid Waste: Depolymerization and Fermentation Combination for Zero-Waste

Özcan Özgür

Waste and pollution have become a major problem in our world. The greenhouse effect of methane gas in the atmosphere is 26 times that of carbon dioxide emissions. In the advanced solid waste disposal system, the prevention of hazardous gases that are out of control in the Landfill area is eliminated with direct daily disposal. In addition, the risk of explosion and bad odor in the landfill areas is eliminated too as no need to use large open areas for waste dumps.
The system assist circular economy with the recycled items in sorting plant. After pre-separation, the organic wastes are directed to the fermentation units; inorganic RDF wastes will be dried and then transformed into liquid and gaseous fuels by processing with Depolymerization units. The fuels in gas and liquid forms out of this progress converted into electrical energy to be burned in generator engines. The final output of the technology is obtained in solid form of Biochar. With these systems, negative environmental impacts are eliminated while economic gain is achieved.
The advanced Low Temperature Depolymerization Technology is a thermochemical system works in absence of oxygen and does not have a chimney which is the source of harmful gas emissions, no solid output ash, no high operating cost for filtration. No pollutants to air and underground water sources that threaten the environment and human health. Low operating temperature prevents the formation of dioxins and furans.
Although the technology and your choice are to convert the daily garbage directly into energy under normal conditions, it is also possible to convert the accumulated garbage into energy with the depolymerization system with some changes on the pre-separation system.
Combination of Depolymerization and Fermentation Technologies for MSW ecological disposal is positioned just below the zero waste process which is the top step in the waste management processes.

Biogas Plants For Agriculture, Livestock And Food Wastes

Özgür Can BAHÇECİ

The energy needs of our country and the world are increasing day by day. Environmental damages and costs of fossil fuels have increased interest in renewable energy. Biogas, which is one of the renewable energy sources, attracts attention in our country. There are 45 biogas plants from animal manure and agricultural wastes in Turkey with total electric capacity of 106 MWe. The average installed electric capacity of the existing biogas plants is 2.4 MWe. This study aims to provide information about the types of waste and biogas plants used in Turkey.

An Urban Biogas To Electricity Potential Analysis: Case Study Of Burdur

Doğancan Beşikçi[1], Egemen Sulukan[2], Tanay Sıdkı Uyar[3]

This paper aims to foresee the economics and environmental effects of biogas based electricity generation in Burdur, Turkey between 2016-2031. To achieve this, a technology-rich reference energy system has been developed to illustrate see the energy commodity flows in Burdur energy system with relevant technol-ogies and specified data. The analysis scope, Burdur is a rural city located in south-western part of Turkey. Due to its geographical location, solar irradiation rates and hours, agriculture and animal breeding are one of the important econom-ic incomes. According to Turkish Statistical Institution data, the total number of animals (sheep, cattle and chicken) vary between 860,000 to 1,250,000 in 2020-2031 time interval. Analysis results show that, the total electricity generation po-tential from animal manure reaches to 0.78 PJ in 2020 and 1.26 PJ in 2031, if this potential utilized efficiently.

A User-Friendly Residential Energy Simulation Tool

Salih Korhan Zorlu[1], Egemen Sulukan[2], Doğuş Özkan[3],Tanay Sıdkı Uyar[4]

Synchronized with the recent improvements in computer and internet based data collection and processing technologies; the governments and private energy suppliers have been looking for alternative pathways to encompass more precise calculation based projections and decisions while considering the investments on low or zero carbon and renewable energy solutions. Therefore, decision-making support tools, e.g. data mining and machine learning software stand out among various options. Since these actors have the ability and infrastructure to gather the required data to process, residents-the demand side players in the sector have almost no chance of benefiting their energy consumption data while making their decisions on energy efficiency in their residences.
This paper aims to design user-friendly simulation software to let a resident or a building manager to build own reference energy system by defining the energy inputs and outputs within easy steps. The software has been designed to apply scenarios on the reference energy system created by the user, such as replacing the obsolete electrical water heater with a more efficient solar water heating system; regarding to the factors including statistical weather and sun light data in the region and installation/decommissioning costs of respective technologies. In addition to the scenario mode, the software is considered to have the ability to make assumptions for the future energy consumption and develop fundamental recommendations for the resident to improve their residence energy efficiency.

Transition to a Low Carbon Future in Maritime Fleet for Climate Change

Alperen Sari[1], Egemen Sulukan[2], Doğuş Özkan[2]

Climate change is a recent important issue for transportation sub-sectors and the environmentalists have been working to combat climate change for decades. As the 90% of the world-trade carried out by the maritime transport; the ships play a crucial role among the transport and trade vehicles. Approximately, the 2,5% of the global greenhouse gas emissions (GHG) are caused by the ships and it has been ever increasing, depending on the expanding maritime transport demand. Reducing the maritime based GHG is a global challenge task, determined by the International Maritime Organization (IMO). Nowadays; a number of measures to reduce carbon footprint and respective course of actions are recently being discussed and developed globally. IMO encourages shipping industry to minimize the carbon footprint by fostering energy efficient onboard technologies, as the global top decision-maker.
In this study, the current technology configuration on a chemical tanker ship has modelled by LEAP (Long- range Energy Alternatives Planning System), one of the widely-used energy decision support tool. Then we focused on reducing greenhouse gas emissions with an alternative scenario according to IMO regulations and future technology developments. The results show that, reducing the ship-based GHG is possible and that is sure to give us a more secure future, in a cleaner atmosphere.

Calculating the Levelized Cost of Electricity by an Urban Scaled Simulation Approach

Utku Köker[1], Halil İbrahim KORUCA[1], Egemen Sulukan[2], Tanay Sıdkı Uyar[3]

Countries are working to define and track pathways decreasing CO2 emissions since the Kyoto Protocol has been signed on 1992. Paris Agreement in 2015 fortified the renewable energy strongly; and as a result US and Europe had to step ahead in renewable energy roadmaps. In the renewable energy transition process, cost of annually generated energy has a great importance. On the other hand, as a small representative of a country, cities have more than one energy generation plant. Various fuel-based plants and energy generation technologies (from renewables to fossil fuelled plants) make the calculation of unit cost of energy generation more complex.
Manisa is an important city in Aegean Region of Turkey, rich in energy generation technologies from renewable to lignite plants presents with a wide opportunity for assessment of energy production costs. However, alternative energy cost calculation methods exist in the literature such as ESA and LCOE, with different limitations and assumptions. In this study, a code on MATLAB environment is prepared to simulate the Manisa electricity generation grid to determine the amount of electricity production for each power plant. The outputs of the simulation are used in cost calculation process on the MS Excel sheets using a modified version of LCOE methodology for the base year 2016.
The same simulation has been applied on EnergyPLAN environment as an additional study to verify the results of the MATLAB code and provide a basis for discussion on the amount of energy and respective equivalent CO2 emissions by these two platforms.

A Regional Green Development Model: "Utilization of Renewable Energy Resources and İncreasing Energy Efficiency in the GAP Region" Project

Yılmaz Dağtekin

Renewable energy sources are significant for the solution of the energy supply problem. The Southeastern Anatolia Region (GAP Region) has considerable resources of renewable energy. Based on the potential and advantages GAP Region, GAP Regional Development Administration is running a Project named ""Utilization of Renewable Energy Resources and İncreasing Energy Efficiency in the GAP Region ". In this proceeding, the activities and results of the project will be shared.

Designing Onshore Wind Farm For Marmara University Following The Global Experience

Gizem Ersoy[1] ,Tanay Sıdkı Uyar[2]

According to increase of population, energy demand around the world, and environmental damage of fossil fuels, clean and sustainable sources such as wind, solar, thermal, hydro.. etc. aroused interest in the World. Especially last decades, discovering a reliable source is a big concern for the community due to the previous reasons.
Renewable energy is a hopeful choice for electricity generation particularly wind energy systems which is called clean energy sources. Fossil fuel reserves such as oil, natural gas, and coal are depleting and have lots of disadvantages for environment. In this point of view, cheap electricity from renewable energy is a great solution.
Wind turbines may be installed on Başıbüyük Campus of Marmara University to produce clean energy. In consideration of commonly used wind power programs, wind turbines energy production for the Campus need can calculate. One of the software is Windsim. Windsim needs climate data for the selected area. Wind data collected from Merra Dataset to reach the results. According the windsim program results the Campus is suitable for producing wind energy to ensure Campus need.

Solar Forecasting Closed-Form Analytic Solution of Cloud Dissipation for a Mixed-Layer Model

B. Özge Şerifoğlu Akyürek, Jan Kleissl

Stratocumulus clouds play an important role in climate cooling and are hard to predict using global climate and weather forecast models. Thus, previous studies in the literature use observations and numerical simulation tools, such as large-eddy simulation (LES), to solve the governing equations for the evolution of stratocumulus clouds. In contrast to the previous works, this work provides an analytic closed-form solution to the cloud thickness evolution of stratocumulus clouds in a mixed-layer model framework. With a focus on application over coastal lands, the diurnal cycle of cloud thickness and whether or not clouds dissipate are of particular interest. An analytic solution enables the sensitivity analysis of implicitly interdependent variables and extrema analysis of cloud variables that are hard to achieve using numerical solutions. In this work, the sensitivity of inversion height, cloud-base height, and cloud thickness with respect to initial and boundary conditions, such as Bowen ratio, subsidence, surface temperature, and initial inversion height, are studied. A critical initial cloud thickness value that can be dissipated pre- and postsunrise is provided. Furthermore, an extrema analysis is provided to obtain the minima and maxima of the inversion height and cloud thickness within 24 h. The proposed solution is validated against LES results under the same initial and boundary conditions.
In addition, this work extended into multiple columns that are coupled through large scale advection. With the inclusion of advection, the results show that the cool and the moist air from the ocean can reduce the lifting condensation level, increasing cloud thickness and resulting in persisting cloud conditions. The sensitivity analysis shows the effect of ocean is dominant for slow varying variables, such as longwave radiation and surface turbulent fluxes, reduces diurnal variation of the inversion height, cools the land airmass and results in thicker clouds.

User-Focused Designing And Pricing An Off-Grid Photovoltaic Solar Energy System

Emre LEBLEBİCİOĞLU[1], Tanay Sıdkı UYAR[2]

Solar energy is significant to supply electricity to the whole world. A photovoltaic energy system is one of the main methods to produce electricity from the sun. The most known photovoltaic systems are the off-grid and grid-tie system.
An estimated 1.16 billion people in the world have no access to electricity. Off-grid photovoltaic systems are the most economical solution for these people. Because, installing electric power transmission lines is a difficult challenge due to costs, harsh geographic conditions and political reasons. Despite many benefits of off-grid photovoltaic systems, there are some drawbacks. One of the fundamental problems of off-grid systems is the initial cost. This is the most important challenge of photovoltaic systems to deal with and user-focused systems can give an efficient solution. A user-focused system is based on calculations to find the capacity of each component of the off-grid photovoltaic system, according to the user's electricity demand. What distinguishes the user-focused designing method from other methods is considering the users' electricity consumption. This study is going to show this issue and the best way to calculate the capacity and determine the most suitable type of system components (solar panel, battery, charge controller, inverter, solar cable, fuses, mounting equipments etc.). The calculations will be illustrated by examples of real off-grid applications. As a result, the study is going to depict that user-focused system design diminishes the initial cost of off-grid photovoltaic solar energy systems.
To sum up, this study is going to highlight how to decrease the cost of off-grid photovoltaic solar energy systems without reducing their efficiency.

Investigation of Engine Performance and Emission Parameters of Ethanol-Acetylene Mixture in an SI Engine at Partial Load

Reyhane Doğan[1], Mehmet İlhan İlhak[2], Orhan Akansu[1], Sebahattin Ünalan[1]

Population growth in recent years has led to tremendous growth in fossil energy demand, and limited oil reserves forced researchers to search for alternative fuels. In this context, ethanol and acetylene which can be obtained from renewable and non-petroleum energy sources, have great potential. In this study, the effects of ethanol and acetylene mixtures on the general performance, emission values of a spark ignition engine have been investigated. In these experiments, acetylene flow rates were fixed at 250 g/h, 500 g/h, 750 g/h and 1000 g/h. The experiments have been carried out on a four-cylinder, four-stroke and water-cooled SI engine designed to develop the rated power output of 75 kW at 5500 rpm under 25% constant load at 1500 rpm and in different air-fuel ratios. As a result of the experiments, it was observed that with the increased amount of acetylene added to ethanol, the excess air ratio range increased and the specific fuel consumption decreased. Exhaust emissions were observed to be decreased in high excess air rates compared to pure ethanol.

Decentralization Of The Power Sector In The City-Province Of Kinshasa For Achieving The Vision 100% Renewable Electricity By 2050

Arcell Lelo Konde, Tanay Sıdkı Uyar

Shifting worldwide cities to 100% renewable cities is one of the sustainable solutions to validate to significantly mitigate greenhouse gas emissions and fight against climate change. This present paper provides an understandable review on the roadmap to decentralized energy in the city-province of Kinshasa in the Democratic Republic of the Congo and analyzes existing possibilities enabling the latter to diversity its power sector which is massively dependent of hydroelectricity. Additionally, steps to be taken at the local level and policies to implement for transitioning all the city-province to 100% renewable electricity by 2050 using water, wind, and solar technologies. As policies continue to drive investments at the global level, the present paper attempts to involve all actors at every level of society in particular, the mayor, stakeholders, local communities, and experts to participate in the adoption of other forms of renewable energy sources, solar and wind, to rise up the electrification rate which is currently assessed at 44% representing almost 490 megawatts of the installed power of the city-province. The energy demand in the city-province is estimated at 1390 megawatts and it is expected to significantly increase by 2050 due to the increase of the growing population. In order to achieve the vision 100% renewable electricity set in this paper which aims a complete decentralization of the power sector, the remaining installed power of 900 megawatts from the current energy demand should be sought from other forms of renewable energy sources to cover the current energy needs of the growing population. Based on the energy potential that the city-province is endowed in renewable resources, the research results suggest a diversification of the power sector with 50% the electric power supply coming from hydropower and the remaining 50% would be supplied from solar and wind technologies using solar photovoltaic systems and wind turbines and others. In this paper, we assume that the city-province would achieve this vision once the power sector is completely decentralized in renewable energy resources.

Integration of Renewable Energy Sources to Urban Energy Grid

Alper Saydam [1], Tanay Sıdkı Uyar [1]

Many developing countries are under pressure to rapidly increase energy generation capacities to address growing demand, to meet energy access challenges, and to foster economic development. Decision makers faced with such pressures often underestimate the potentially significant and rapid contribution that renewables can make.
The emissions of pollutant and greenhouse gases from fossil fuel-based energy generation has led to climate change. Depletion of already scarce stock of fossil fuel is another problem. All these factors caused an increase of the price of fossil fuel products. Renewable energy sources like wind, solar, hydro, biomass etc. is a solution to both problems addressed before.
Technological advancements made it possible to accurately calculate the side cost of the energy production and consumption of traditional energy generation methods. New methods allowed renewable energy production to be a cheaper option to fossil fuels too.
Turkey has invested in renewable energy sources for the last few years. These investments have proven to be useful for the energy balance of the country. The next step is to find an efficient way to integrate these sources into the national power grid.

Energy Efficiency Technologies in Smart Buildings

Hasan Heperkan

In December 2015, the Paris Agreement brought universal consensus to strengthen global climate action with the aim of keeping the global temperature rise this century well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C. The Agreement entered enforcement in early November 2016. Nationally determined contributions, descriptions of countries' commitments to help reach the goal of the Paris Agreement have been developed in a variety of forms: some with national greenhouse gas (GHG) emissions reduction targets, others with sectoral breakdowns of emissions reduction commitments, and others include renewable energy and energy efficiency targets and adaptation actions. The building sector is responsible for approximately 50% of global electricity demand and 25% of global GHG emissions, from which roughly 30% are direct emissions (e.g., space heating and hot water production) and 70% are indirect emissions (e.g., electric appliances and lighting). Technological solutions are already available and cost-efficient to reduce a significant portion of emissions. Examples include: increased thermal insulation; double/triple glazing for windows; energy efficient heating, cooling, ventilation, lighting, and appliances; integrating renewables.
Proper insulation of a building's external area (walls, roof, foundation, floors) reduces thermal losses and helps to minimise the amount of energy needed to keep the indoor air temperature at a comfortable level. Reaching a low U-value for windows is crucial to minimise energy consumption for heating or cooling.
Increasing the energy efficiency of space and water heating and space cooling devices has a major impact on the overall energy consumption of buildings (e.g. Condensing gas boilers, Heat pumps, Absorption chillers, Tri-generation). Heat pumps are also a potentially valuable element of "nearly Zero Energy Buildings".
Ventilation provides indoor areas with fresh air and helps keep internal temperatures and humidity at comfortable levels. The constant exchange of indoor air reduces moisture, odours, and pollutants (e.g. Mechanical ventilation with heat recovery).
Lighting accounts for nearly 10%-15% energy consumption in the residential sector; in comparison, commercial building consumption is around 15%-30%. There is a high potential to reduce energy consumption for lighting (e.g., Energy efficient solid-state lighting, Light Emitting Diodes).
Retrofitting of the existing building stock plays a key role in reaching climate targets. By prioritising a deep renovation policy pathway, countries can increase green employment significantly, while saving households billions of Euros on energy bills. The article discusses relevant technologies in the field.

A Comprehensive Sustainability Investigation of Solar Hydrogen Production Options

Canan Acar

In this study, a comprehensive life cycle assessment of solar hydrogen produc-tion options is conducted. The selected clean hydrogen production options are steam methane reforming, conventional electrolysis, photoelectrochemical cells, PV electrolysis, and photocatalysis. A complete source to service approach is taken when evaluating the environmental and technical performance of the select-ed hydrogen production options. Greenhouse gas (GHG) emissions, resource use, fossil fuel use, water use, energy and exergy efficiencies, and cost of hydro-gen are the selected sustainability performance criteria. In the first part of this study, the selected hydrogen production options are compared based on these performance criteria. In the next part, the performance evaluation results of each option are normalized and ranked in 0-10 range where 0 gives the least sustaina-ble manner and 10 is the hypothetical ideal case where there is no negative impact on the environment, zero resource and water use, and 100% energy and exergy efficiencies, and zero cost. The results show that in terms of GHG emissions, re-source use, fossil fuel use, and water use, PEC are the most advantageous. Steam methane reforming has the highest energy and exergy efficiencies and the lowest cost compared to the other selected options. When all of the selected performance criteria are taken into account together, the average normalized rankings show that PEC have the highest rankings (5.24/10) and steam methane reforming has the lowest rankings (3.24/10).

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1946 yılında Ankara'da kurulan Garanti Bankası, 30 Haziran 2018 tarihi itibarıyla 385 milyar Türk Lirası'na yaklaşan konsolide aktif büyüklüğü ile Türkiye'nin en büyük ikinci özel bankası konumunda.

Kurumsal, ticari, KOBİ, bireysel, özel ve yatırım bankacılığı, ödeme sistemleri dahil olmak üzere bankacılık sektörünün tüm iş kollarında faaliyet gösteren Garanti, Hollanda ve Romanya'daki uluslararası iştiraklerinin yanı sıra bireysel emeklilik ve hayat sigortası, finansal kiralama, faktoring, yatırım ve portföy yönetimi alanlarındaki finansal iştirakleri ile entegre bir finansal hizmetler grubu.

30 Haziran 2018 itibarıyla yurt içinde 922 şube, Kıbrıs'ta yedi, Malta'da bir olmak üzere yurt dışında sekiz şube, Londra, Düsseldorf ve Şangay'da birer temsilcilikten oluşan yaygın bir dağıtım ağı ve 18,522 çalışanıyla 15.8 milyon müşterisinin her türlü finansal ihtiyacına cevap veriyor. En son teknolojik altyapıya sahip 5.055 ATM, ödüllü Çağrı Merkezi, internet, mobil ve sosyal bankacılık platformlarıyla tüm kanallarda kesintisiz bir deneyim ve bütünleşik kanal kolaylığı sunuyor.

Tüm paydaşlarına değer yaratarak sürdürülebilir büyüme sağlamak hedefiyle ilerleyen Garanti, stratejisini, müşterilerine karşı her zaman "şeffaf", "anlaşılır" ve "sorumlu" bir yaklaşımla, ihtiyaçlarına uygun ürün ve hizmetler sunarak müşteri deneyimini sürekli iyileştirmek ilkeleri üzerine yapılandırıyor. Sahip olduğu yetkin ve dinamik insan kaynağı, teknoloji alanındaki kesintisiz yatırımları, kalite ve müşteri memnuniyetinden ödün vermeden sunduğu inovatif ürün ve hizmetleri, Garanti'yi Türk bankacılık sektöründe lider bir konuma taşıyor.

Banka'nın vazgeçilmez değerlerini destekleyen ileri bir kurumsal yönetişim modeli uygulayan Garanti Bankası'nın hakim ortağı, hisselerinin %49.85'ine sahip olan Banco Bilbao Vizcaya Argentaria S.A. (BBVA)'dır. Hisseleri Türkiye'de, depo sertifikaları İngiltere ve ABD'de işlem gören Garanti'nin Borsa İstanbul'daki halka açıklık fiili dolaşım oranı 30 Haziran 2018 itibarıyla %50.06'dır.

Garanti'nin sürekli gelişen iş modelinin arkasında sorumlu ve sürdürülebilir kalkınma, müşteri deneyimi, çalışan mutluluğu, dijitalleşme, sermayenin optimum kullanımı ve verimlilik odaklı stratejik öncelikleri yer alıyor. Garanti'nin, müşterilerine sunduğu kişiselleştirilmiş çözümlerin ve zengin ürün yelpazesinin 319.2 milyar Türk Lirası değerinde kredi ve gayri nakdi kredi portföyüne ulaşmasında önemli bir payı bulunuyor. Garanti'nin sağlam aktif kalitesinden ödün vermeyerek, sermaye yaratarak, disiplinli ve sürdürülebilir büyüme stratejisi, Garanti'nin güçlü adımlarla ilerlemesini sağlıyor. Finansal ve finansal olmayan risklerin dünya standartlarındaki entegre yönetimiyle sağlanan etkin risk yönetimi ve yeni fırsatları yakalama konusundaki organizasyonel çevikliği sayesinde Garanti, tüm paydaşları için sürdürülebilir değer yaratıyor.

Bunların yanı sıra stratejik ortaklıkları, hem Garanti hem paydaşları tarafından öncelikli kabul edilen konulara odaklanan toplumsal programları ve etki yatırımı odaklı kredi kullandırımlarıyla Garanti, ortak değer yaratıyor ve pozitif değişimi destekliyor.

Established in 1946, Garanti Bank is Turkey's second largest private bank with consolidated assets of nearly TL 385 billion (USD 84.3 billion) as of June 30, 2018.

Garanti is an integrated financial services group operating in every segment of the banking sector including corporate, commercial, SME, payment systems, retail, private and investment banking together with its subsidiaries in pension and life insurance, leasing, factoring, brokerage and asset management, besides international subsidiaries in the Netherlands and Romania.

As of June 30, 2018, Garanti provides a wide range of financial services to its close to 15.8 million customers with 18,522 employees through an extensive distribution network of 922 domestic branches, 7 foreign branches in Cyprus and one in Malta, and 3 international representative offices in London, Düsseldorf and Shanghai. Garanti offers an omni-channel convenience with seamless experience across all channels with 5,055 ATMs, an award winning Call Center, internet, mobile and social banking platforms, all built on cutting-edge technological infrastructure.

Moving forward to maintain sustainable growth by creating value for all its stakeholders, Garanti builds its strategy on the principles of always approaching its customers in a "transparent", "clear" and "responsible" manner, improving customer experience continuously by offering products and services that are tailored to their needs. Its competent and dynamic human resources, uninterrupted investments in technology, innovative products and services offered with strict adherence to quality and customer satisfaction carry Garanti to a leading position in the Turkish banking sector.

Implementing an advanced corporate governance model that promotes the Bank's core values, Garanti has Banco Bilbao Vizcaya Argentaria S.A. (BBVA) as its majority shareholder with 49.85% share. Its shares publicly traded in Turkey, and its depositary receipts in the UK and the USA, Garanti has an actual free float of 50.06% in Borsa Istanbul as of June 30, 2018.

Garanti's constantly improving business model is driven by its strategic priorities focused on responsible and sustainable development, customer experience, employee happiness, digitalization, optimal capital utilization and efficiency. Its custom-tailored solutions and wide product variety play a key role in reaching TL 319.2 billion (USD 70.0 billion) loans and non-cash loans. Garanti's capital generative, disciplined and sustainable growth strategy that strictly adheres to solid asset quality enables the Bank to move forward strongly. Its effective risk management through world-class integrated management of financial and non-financial risks and organizational agility in capturing new opportunities result in sustainable value creation for all its stakeholders.

Moreover, Garanti creates shared value and drives positive change through lending based on impact investment, as well as strategic partnerships and community programs focusing on material issues for both Garanti and its stakeholders.

Birleşik Krallık merkezli bir şirket olarak 37 yılı aşkın deneyimiyle RES Group, Dünya çapında toplam 16 GW ve üzeri proje portföyüyle yenilenebilir enerji piyasasının öncü firmalarından biridir. Ağırlıklı olarak karasal ve deniz üstü rüzgâr enerjisi, güneş enerjisi ve düşük karbonlu bir geleceğe olanak sağlayan enerji depolama, iletim ve dağıtım alanlarında faaliyet gösterir.

Stratejik çözüm ortakları ile işbirliği içinde çalışan RES, şebeke bağlantılı büyük ölçekli rüzgâr ve güneş enerji santralleri geliştirmek için gereken teknik, mühendislik, inşaat, finansman ve işletme alanlarında uzmanlaşmış bir kadroya sahiptir. Bugüne kadar 16.000 MW'ın üzerinde rüzgâr ve güneş enerjisi projesini geliştiren ve kısmen hayata geçiren RES; 2000'i aşkın çalışanıyla halihazırda 11 ülkede faaliyet göstermekte ve eş zamanlı olarak tüm dünyada çeşitli aşamalardaki projeleri takip etmekte, yarışmalara katılmakta, yeni teknolojilere yatırım yapmaktadır.

"Sürdürülebilir bir gelecek için enerji" ilkesiyle yola çıkan RES Group, küresel ölçekte genişlemesine 2009 yılında Türkiye'yi de dahil etme kararı vermiştir. O günden bu yana 200 MW'ın (megavat) üzerinde rüzgar enerjisi projesi geliştirmiştir. Geliştirme portföyü 5.000 MW'ın üzerinde güneş ve rüzgar enerjisi projesini kapsamaktadır. RES Anatolia Holding A.Ş., kuruluşundan günümüze rüzgâr ve güneş enerjisi sektörlerinde saha belirleme, ölçüm istasyonları kurulumu, risk ve kısıt analizleri, EPDK önlisans başvurularının yapılarak ihalelere katılım, önlisans süresi içerisinde alınması gereken izinlerin elde edilerek projelerin lisans aşamasına getirilmesi de dahil, proje geliştirilmesinin her aşamasında yurtiçindeki ve yurtdışındaki tecrübeli ekibiyle başarı sağlamaya devam etmektedir. 37 yıldır sadece yenilenebilir enerji projelerinin üstüne yoğunlaşan RES Group, Türkiye'de bulunduğu 10 yılı aşkın süre içinde, toplamda 218 MW'lık rüzgâr; 18,6 MW lisanslı ve 17 MW lisanssız olmak üzere toplamda 35,6 MW'lık güneş enerji projesi geliştirmiş olup, 2017 TEİAŞ kapasite yarışmalarında kazanılan 265 MW'lık rüzgâr enerji projesinin geliştirilmesine devam etmektedir.

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As a UK based company with more than 37 years of experience, RES Group is one of the leading independent renewable energy companies in the renewable energy market with a project portfolio of over 16 GW worldwide. RES' core activities are onshore and offshore wind, solar, and technologies that will be enablers to a low carbon future – energy storage and transmission & distribution.

RES works in cooperation with its strategic solution partners, has a specialized staff in technical, engineering, construction, financing and management fields to develop grid-connected large-scale wind and solar power plants. To date, RES has developed and partially installed more than 16,000 MW of wind and solar energy projects; currently operates in 11 countries with over 2000 employees, simultaneously follows the projects on various stages worldwide, attends to tenders and invests in new technologies.

Setting "Energy for a Sustainable Future" as a principle, RES Group decided to include Turkey in its global scale development in the year of 2009. Since then, RES Anatolia Holding A.Ş. has developed more than 200 MW of wind energy projects. Its project development portfolio composes of more than 5,000 MW of wind and solar projects. Since it's been founded, RES Anatolia continues its success in every stage of project development with its local and international teams with different experiences including site identification, measurement station configuration, risk and constraint analysis, attendance to the tenders by performing EPDK pre-license applications and obtaining all permits that has to be gathered during the pre-license period and gathering the licenses. By focusing only on renewable energy projects for 37 years, RES Group has developed 218 MW wind, 35 MW solar energy projects (18.6 MW licensed, 17 MW unlicensed), has proceeded with developing 265 MW wind energy projects that are won in 2017 TEIAS (Turkish Electricity Transmission Corporation) capacity tenders in 10 year period in Turkey.

9. ULUSLARARASI %100 YENİLENEBİLİR ENERJİ KONFERANSI

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Vestas, sürdürülebilir enerji çözümleri konusunda enerji endüstrisinin küresel ortağıdır. Küresel ölçekte rüzgar türbinleri imalatı, montaj ve devreye alımı ve bakımlarını yaparız ve 80 ülkede 101 GW kurulu gücüyle tüm diğer üreticilerden daha fazla rüzgar türbini kurduk.

Endüstri lideri akıllı veri yeteneklerimiz ve servis verdiğimiz benzersiz 86 GW 'lik rüzgar türbinleri sayesinde verileri yorumlar, tahmin eder ve rüzgar kaynaklarını araştırır ve sınıfının en iyisi rüzgar enerjisi çözümlerini sunarız. Müşterilerimiz ile birlikte, Vestas 'ın 24.600 ' den fazla çalışanı, güzel bir geleceğe güç vermek için dünya sürdürülebilir enerji çözümleri için çalışmaktayız.

Türkiye pazarına daha iyi hizmet verebilmek adına Vestas Türkiye ofisini 2008 yılında kurduk ve 200 çalışan ile 1,6 GW 'ın üzerinde kurulu güce ulaştık. 4 ana bölge, eğitim merkezinin de dahil olduğu operasyon merkezi, 2 ana depo ve tecrübeli montaj ve bakım ekipleri, yerli kanat, kule, jeneratör imalatı ile beraber rüzgar sektörünün gelişiminde önemli bir rol oynamaya devam etmekteyiz.

Vestas is the energy industry's global partner on sustainable energy solutions. We design, manufacture, install, and service wind turbines across the globe, and with 101 GW of wind turbines in 80 countries, we have installed more wind power than anyone else.

Through our industry-leading smart data capabilities and unparalleled 86 GW of wind turbines under service, we use data to interpret, forecast, and exploit wind resources and deliver best-in-class wind power solutions. Together with our customers, Vestas' more than 24,600 employees are bringing the world sustainable energy solutions to power a bright future.

To support the local market needs Vestas Turkey office is established in 2008 and reached more than 1.6 GW installed capacity with 200 employees. With 4 subregions, an operations center including the training center, 2 main warehouses and with experienced installation and service teams and sourcing of local blades, towers and generators Vestas continues to play an important role in the development of wind energy industry.

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Kahve sektöründe sürekli büyüyen bir dünya şirketi olarak 1871 yılından bu yana kahve üreten Kurukahveci Mehmet Efendi; bu zanaatı beraberindeki ustalık, bilgi, tecrübe ve inceliklerle babadan oğula, ustadan çırağa aktarmaya devam ediyor. Kurukahveci Mehmet Efendi'nin misyonu, kahveseverleri ürettiği nefis Türk kahvesiyle buluşturmak ve kaliteden ödün vermeden tüm dünyada geniş kitlelere Türk kahvesini tanıtmaktır.

Kurukahveci Mehmet Efendi, Türk haftaları ve çeşitli festivallerde stand açarak sunum yapıyor, "Türk Kahvesi"ni ve kültürünü dünyaya yayıyor. Sunumlar sırasında ayrıca "Türk Kahvesi"nin tarihçesini ve kültürümüzdeki yerini anlatarak, kültür elçiliği görevine devam ediyor.

Kurukahveci Mehmet Efendi, a constantly growing world company in the coffee industry that has been producing coffee since 1871, continues to transmit this art, together with the mastery, knowledge, experience and skills accompanying it, from father to son and from master to apprentice. Kurukahveci Mehmet Efendi's mission is to present coffee lovers with the exquisite Turkish coffee it produces and to promote Turkish coffee to wider masses all over the world, without compromising its quality.

Kurukahveci Mehmet Efendi participates in Turkish weeks and a number of festivals, setting up stands, holding presentations and promoting "Turkish coffee" and culture throughout the world. During these presentations it also presents the history of "Turkish coffee" and its place in Turkish culture, thus upholding its role as a cultural ambassador.

Çaykur, 46 Yaş Çay İşleme Fabrikası, 1 Çay Paketleme Fabrikası, 1 Pazarlama ve Üretim Bölge Müdürlüğü, 8 Pazarlama Bölge Müdürlüğü, Anatamir Fabrikası, Atatürk Çay ve Bahçe Kültürleri Araştırma Enstitüsü Müdürlüğü, 12.000 çalışanı ve 8.650 ton/gün yaş çay işleme kapasitesi ile Türkiye çay sektörünün en büyük ve lider kuruluşudur.

Bölgede üretilen yaş çay ürününün yıllara göre değişmekle birlikte yaklaşık %60 - 65´ı Çaykur tarafından satın alınmaktadır. Çaykur´un yurt içi kuru çay piyasasındaki pazar payı da yaklaşık %60-65 `dir.

Vizyon

Çaykur, gelişen pazarın koşullarına uygun olarak kaliteyi, verimliliği ve ürün çeşitliliğini artırarak sektörde en büyük ve öncü kuruluş olamaya devam edecektir.

Misyon

Türkiye´nin Tarım Politikasına uygun olarak çay ziraatını geliştirmek, çay kalitesini ıslah etmek, işlenmesini teknik esaslara göre yürütmek, iç ve dış pazar isteklerini karşılamak üzere kuru çay üretmek, ithal etmek ve ihraç etmek, verimlilik esasına dayalı işletme politikasıyla sermaye birikimine yardım ederek yatırım kaynağı yaratmaktır.

Kar Altın da Çay;

Doğu Karadeniz Bölgesinde yetiştirilen çaylar, ekolojik şartlar nedeniyle kış aylarında kar altında kalmaktadır. Bu durum hastalık ve zararlıların gelişmesi ve yayılması için oluşabilecek uygun ortamları doğal olarak engellediği için ülkemizi sağlıklı çay üretimi konusunda ideal ülke durumuna getirmekte ve Organik Çay tarımında da en avantajlı ülke konumuna sokmaktadır.

Yukarıda bahsedilen ekolojik şartlar sayesinde Doğu Karadeniz´deki topraklarımızda ve de çay tarımında hiçbir suretle kimyasal mücadele ihtiyacı oluşmamıştır. Kimyasal zirai mücadele ilacı kullanılmadan üretilen ÇAYKUR Siyah, Yeşil ve Beyaz çaylarımızı gönül rahatlığıyla tüketebilirsiniz.

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Çaykur, Turkey With its 12,000 employees and 8,650 tons / day of wet tea processing capacity, the tea plantation of Turkey, with a capacity of 46 tea tea processing plants, 1 tea packaging plant, 1 marketing and production district management, 8 marketing regional directorate, Anatamir plant, Atatürk tea and horticultural research institute directorate Is the largest and leading company in the tea industry.

Vision

Çaykur will continue to be the largest and leading company in the sector by increasing the quality, productivity and product variety in accordance with the conditions of the developing market.

Mission

Importing and exporting dry tea to meet the demands of domestic and foreign markets, helping to accumulate capital with efficiency based policy, to increase the investment resources by improving the quality of tea, improving the quality of tea in accordance with the Agricultural Policy of Turkey, improving tea quality, .

Tea in Snow Gold;

Tea grown in the Eastern Black Sea Region is under snow during the winter months due to ecological conditions. This situation naturally hampers the environment that can occur for the development and spread of disease and pests, thus making our country the ideal country for healthy tea production and also the most advantageous country in Organic Tea cultivation.

Thanks to the above-mentioned ecological conditions, we do not need any chemical fighting in our lands in Eastern Black Sea and in tea farming. You can consume our ÇAYKUR Black, Green and White teas without the use of chemical pesticides.

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