26 JULY 2017

TÜSİAD CONTRIBUTION TO THE CALL FOR SUBMISSIONS BY PARIS COMMITTEE ON CAPACITY BUILDING

TÜSİAD, a voluntary business organization of leading entrepreneurs and executives of the business community, has a significant representative capacity of the economic activity in Turkey. Conducting economic activities with a consciousness that notes environmental concerns, is one of the fundamental principles of TÜSİAD. Pioneers in their fields, TUSIAD members have also implemented projects with climate-related risk management approach.

Some examples of TÜSİAD and its members "capacity-building activities for the implementation of intended nationally-determined contributions (INDCs) in the context of the Paris Agreement" are listed below:

- TÜSİAD Environment and Climate Change Working Group was established in 1996 to engage with public authorities on climate change issues, including national policies and positions. In 2016, a report named "Addressing Climate Change From an Economic Policy Perspective Report" was prepared under the coordination of TÜSİAD Environment and Climate Change Working Group. Moreover, TÜSİAD regularly attends Conference of Parties, and carries out evaluation meetings afterwards. TÜSİAD has also established a Task Force in early 2017, in order to address the issues and measures that are important for the business world in tackling climate change.

- Akçansa has implemented "The Use of Microalgae as Carbon Capture in Cement Production" project in their Çanakkale Factory. Microalgae are microorganisms containing carbohydrate, protein, fat, and vitamin; they can incorporate fat at rates varying between 15% and 77%. In order to grow and accumulate fat within their system, they need the CO_2 as a source of inorganic carbon. This pilot scale system installed at Çanakkale Factory benefits from this characteristic of microalgae. By feeding the micro algae repositories with the flue gas from the clinker production line, the emissions from the flue gas are eliminated. It is aimed to eliminate 25,360 kg of CO_2 emissions annually in result of the daily production of 5 kg of microalgae at the pilot plant. Furthermore, Akçansa has established a power plant in 2011, within the context of the Waste Heat Recovery Project. The power plant has a capacity of 15 MW and it is located at Çanakkale. Thanks to the facility, approximately 119 thousand GJ of energy savings and 15.7 thousand tons of CO_2e emission reduction were achieved in its first year. Throughout the years, energy production also increased, as of 2015 the recovered energy rose to the level of 346 thousand GJ, and the amount of emission reduction to the level of 51.4 thousand tons of CO_2 e. Akçansa has also made renewable energy investments at their Çanakkale Factory. The wind turbine investment, which has an installed capacity of 2.35 MW, will generate 7,844 MWh of electricity annually.

- ARÇELİK's business strategy includes designing and manufacturing energy-efficient products and investing in resource efficiency in production thus minimizing the environmental impacts while achieving significant savings in energy costs. UN Sustainable Developments Goals are integrated in Arçelik's corporate sustainability strategy. In line with SDG #12, Responsible Consumption and Production, the company has carried out almost 270 energy efficiency projects in 2016, and reached an annual saving of 138,720 GJ and 12,257 tons CO2 emission reduction. The total saving corresponds to total annual electricity generation of a solar power plant, which has an installed capacity of 24 MW. White good appliances constitute up to 11% of the household electricity consumption. Having said that market transformation towards resource efficient appliances helps countries to better meet INDC targets and

reduces carbon emissions globally. Compared to those produced 20 years ago, Arçelik white good appliances are up to 80% more energy efficient and consumes 70% less water today. Arçelik has saved about 1 million m^3 of water in the last 6 years through its operations in production for recovery and reuse. This saving equals to the daily water consumption of 1.2 million households. Circular economy is another pillar of Arçelik's business strategy; in this context Arçelik has prevented 108.3 GWh of energy and 2,3 million m^3 of water consumption in total by replacing and recycling the old products in the market with environmental-friendly new products at its own WEEE facilities in Eskişehir and Bolu, since 2014. This value is equivalent to annual energy production of 17 wind turbines of 2,5 MW each. In this respect, this saving equals to the daily energy consumption of 14 million households, thus 54 thousand tons of CO2 emissions were prevented. UN SDG#17 states "partnership for goals" and Arçelik is proud to be a global partner of "United for Efficiency" project led by UNEP and GEF. This global project aims for a successful and effective public-private partnership for market transformation towards more energy efficient products particularly at developing countries.

- ÇİMSA contributes to emission reduction targets with its energy efficiency policy and its activities through producing energy from alternative fuels. The cement plant in Eskişehir, has reached 42,700 tons of CO2 reduction since 2014, by substituting conventional fuels, such as coal and petroleum with alternative fuels. Also, Çimsa has established a power plant, a waste heat recovery system, at its Mersin Plant in 2012. The power plant has an installed capacity of 9.8 MW, and it generates 20% of the cement plant's annual electricity needs. The electricity generation and CO_2 savings of the project for the years 2014, 2015, and 2016 are given below:

	2014	**2015**	**2016**
Electricity Generation (MWh/y)	50729	52121	56084
CO_2 Savings	21964	22681	24502

- OYAK Group carries out circular economy applications and low carbon solutions. OYAK Group started the third period of its three-year-sustainability objectives which it first defined in 2011. OYAK Group aims to implement its sustainability goals for the period 2017-2019 in parallel with the UN's Sustainable Development Goals of the 2030 Agenda for Sustainable Development. Group has achieved significant energy saving, more than 1.77 billion kWh as a result of the energy efficiency projects carried out in the last two years in its mine and metallurgy, cement, and concrete companies. Since 2013, the company has generated 1.5 million kWh of electricity from renewable resources OYAK Group achieved conservation of 12.2 million m3 of soil between 2015 and 2016 through the use of alternative raw materials/fuels and resource efficiency. OYAK creates synergies between Group Companies with the implementation of industrial symbiosis options, by taking advantage of its multi-sectoral structure. Ünye Çimento, Erdemir Group Sustainability Department and their environmental teams began implementing a new industrial symbiosis practice. Erdemir's steel slag, which contains iron, is used as a substitute for raw iron ore – by 70% – in cement production. The Group conducts industrial testing to achieve 100% substitution. By developing innovative products and services, OYAK Group creates added value in all its business fields, Hektaş became the first domestic manufacturer to obtain ECOCERT Organic Agriculture Certification for six products in its portfolio and it is the pioneer of sustainable agriculture in Turkey.

- TÜPRAŞ has conducted energy saving projects that are prioritized such as waste heat recovery, furnace and boiler modernization, modernization of process units and heat integration. Between 2011-2016, 1.15 million tons CO2 mitigation has been achieved, which corresponds to an energy saving of 3.6 million Gcal. In addition to that water resources are used more efficiently in line with its climate change related risk management approach via reuse of municipal and industrial wastewater projects. Between 2008-2016 water saving amount correspond to 1.2 million population water consumption.