Asia-Pacific
Economic Cooperation

2017/EWG54/008
Agenda Item: 5a

Notable Energy Developments – United States

Purpose: Information
Submitted by: United States

APEC
VIET NAM
2017

54th Energy Working Group Meeting
Wellington, New Zealand
22-23 November 2017

U.S. Notable Energy Developments for EWG54
Wellington, NZ

DOE SunShot Cost Target Achieved Early: DOE announced in September 2017 that the SunShot Initiative cost target of averaging $0.06/kWh by 2020 for installed utility-scale PV systems in the U.S. was achieved three years ahead of schedule. With falling costs, the past decade has seen installed solar power capacity in the U.S. increase from 1.1 GW to 47.1 GW – enough to power 9.1 million average American homes. Given this success, the SunShot program announced a new target to reduce costs by an additional 50% to $0.03/kWh for utility-scale solar by 2030, while also addressing grid integration challenges related to grid reliability, resilience, and storage and addressing key market barriers in order to enable greater solar adoption. (https://www.energy.gov/articles/energy-department-announces-achievement-sunshot-goal-new-focus-solar-energy-office, https://www.energy.gov/eere/sunshot/sunshot-2030)

8th Solar Decathlon Held in Denver, Colorado: The biennial collegiate competition featured 11 student teams who competed in 10 contests challenging the teams to design and build full-size, energy- and water-efficient, solar-powered houses. Since the first Solar Decathlon in 2002, over 150 collegiate teams and more than 19,000 students have participated in the U.S. competition. In addition, DOE has supported expansion to hold Solar Decathlon competitions in China, Europe, and South America and the Caribbean, while future competitions are being planned in the Middle East and Africa. (https://www.solardecathlon.gov/)

Wind Energy Continues Rapid Growth in U.S.: DOE released three wind market reports in August 2017 that demonstrate continued growth in wind energy across the United States. The U.S. added more than 8.2 GW of wind capacity in 2016, representing 27% of the year's energy capacity additions. Wind supplied about 6% of U.S. electricity in 2016, and 14 states now get more than 10% of their electricity from wind. The first commercial offshore wind project in the U.S., the 30-MW Block Island Wind Farm off the coast of Rhode Island, began operating in December 2016. (https://www.energy.gov/articles/energy-department-reports-wind-energy-continues-rapid-growth-2016)

Building and Plant Programs Produce Significant Savings: More than 35 partners joined DOE's Better Buildings Challenge over the past year, committing to improve energy intensity across their entire building portfolios by at least 20% over ten years. In total, more than 345 Better Buildings Challenge partners have cumulatively saved 240 trillion Btus and an estimated $1.9 billion in energy costs. In the manufacturing sector, nearly 200 Better Plants partners have voluntarily committed to reducing energy intensity by 25% over a 10-year period across all their U.S. operations. The 3,000 facilities represented have achieved cumulative cost savings of $4.2 billion. (https://www.energy.gov/articles/better-buildings-challenge-partners-save-19-billion-18-achieve-their-portfolio-wide-goal, https://www.energy.gov/eere/articles/better-plants-program-partners-save-42-billion-energy-costs, https://www.energy.gov/eere/articles/doe-recognizes-achievements-better-buildings-initiative-partners-results-technology)

Global LNG Fundamentals Handbook

Through its recently launched handbook titled "Global LNG Fundamentals", the U.S. Department of Energy (DOE) seeks to leverage the abundance of natural gas resources and expanding liquefied natural gas (LNG) exports to promote jobs and economic growth in the U.S. and for the benefit of our partners around the world. Natural gas development can play a key role in a clean energy future, but development of natural gas markets and LNG projects require timely government decisions. Accessing natural gas could enable public entities and private companies to generate power from indigenous resources and also to generate revenue from LNG exports. For those countries without resource potential, or in transition to developing resource potential, developing LNG receiving capability can provide a clean fuel for generating electricity, producing industry feedstocks, and fueling industries. Participation in regional and global LNG markets promotes economic growth for all countries involved.

DOE's "Global LNG Fundamentals" Handbook is based on an original version that was produced as a guide for African governments exploring natural gas development and LNG projects. The original book was funded by the U.S. Agency for International Development via Power Africa and was produced by DOE in cooperation with the United States Energy Association (USEA). DOE has revised, updated, and reformatted the original content to serve as the base of a global initiative. DOE plans to expand the handbook over the coming years to include modules that will impart lessons from multiple regions to share knowledge of best practices. These modules would be produced by gathering regional and global experts to explore topics such as finance, project lessons and case studies, market development, governance/government roles, and pricing issues specific to regional contexts. When all of the regional modules are complete, they will provide a broad range of lessons that governments and companies can draw from to expedite decision making and project implementation.

The handbook attempts to cover a broad spectrum of topics involved with developing and financing a LNG project, covering in depth the considerations for a LNG export project and development of a diverse domestic market. The book also addresses LNG import projects for local LNG sales as an alternative to economy-to-economy pipelines. The handbook also discusses the decisions that need to be made and the lenses through which to view the factors leading to these decisions. The Handbook recognizes that each economy will need to make its own decisions based on its specific domestic priorities, trade agreements, economic goals, and political and market dynamics.
The handbook is not intended to be comprehensive. Governments would need to utilize the services of experienced advisors in legal, contractual, financial, technical and strategic areas. This advice can support the training of governmental staff that should also include using all other means available, including well-established academic institutions that focus on the oil and gas or LNG sectors.

The global version of the handbook can be accessed at the following link: https://energy.gov/ia/downloads/global-lng-fundamentals.

The handbook and some additional information about the program can be accessed at the following link: https://energy.gov/ia/articles/understanding-natural-gas-and-lng-options-handbook.