



Conference Proceedings

ASES National Solar Conference 2019
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Introduction to SOLAR 2019 Proceedings

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The American Solar Energy Society believes that supplying 100% of America's electricity with renewable energy is not only possible but urgently necessary. We need to decarbonize our economy in order to have any chance of constraining the global temperature increase to less than 2 °C, which in itself will be disruptive to humankind.

ASES represents the scientists, educators, and activists who can provide renewable energy technologies and solutions for climate action in the United States that will have an immediate and large-scale impact. The ASES SOLAR 2019 Conference focused on those strategies.

The door for impacting climate change is rapidly closing. ASES intends to be a loud voice to follow the lead of states and cities across the country to decarbonize the nation's electricity supply and make an impact while that door is still open. We are in a race against time, and ASES believes we can win that race.

The ASES SOLAR 2019 Conference was held in one of the leading states for taking climate action, Minnesota. Minnesota has enacted climate policies that have provided leadership in the growth of wind power, solar power, community solar, variable generation integration technologies, energy efficient buildings and electrification of the transportation sector. But the strategies and solutions that were presented at the conference can – and must – be implemented across the country. Minnesota is pleased to host this important conference on taking climate action.

Many strategies will be necessary to take immediate climate action: electricity supply (residential, commercial, industrial, utility-scale solar; on land wind power; offshore wind power); transmission (including a national HVDC grid); electrifying the economy (transportation, homes, businesses, buildings); policies (international, national, state, intra-state, city); public support (social media; popular press, education); and personal actions (renewable energy opportunities; energy efficiency, electric vehicles).

Nearly 300 attendees from across the country converged at the Crowne Plaza Aire Hotel near the MSP Airport to share their concerns and solutions for addressing the climate crisis. Keynote speakers highlighted the need for urgent action. Global temperatures must rise no more than 0.5 deg C above today's temperatures in order to avert the worst impacts of climate change.

The conference focused on the role renewable energy can play in curbing climate change. The strong conclusion from the conference is that carbon emissions must be eliminated from the electricity and electrified transportation and new building sectors within just two decades. A rapid increase in electric power generated by renewables – primarily wind and solar power – will dramatically offset carbon emissions from burning fossil fuels and provide enormous investment opportunities.

New large-scale wind and solar projects need to be built where the resources are strongest – the wind-rich Plains states and the solar-rich southwest states. In order to get the lowest-cost renewable electricity to the cities where it is needed, conferees were told, a new network of narrow, ultra-high voltage direct current (HVDC) power lines needs to be built to carry power across the country – not unlike the nation-wide Interstate highway system established back in the 1960's and 1970's, though HVDC power lines will not need to be strung through the center of population centers. A national HVDC network would make low cost renewable electricity available across the entire country.

But the conference also brought the message that solar resources are nearly as robust in both rural and urban communities anywhere in the country. New techniques are available to find appropriate sites for solar projects on homes and buildings in population centers, making renewable power available to the home/business and immediate community.

A major message from the conference is that people need to be bold in their commitment to taking climate action, and they must communicate the need for action among their colleagues, friends and families. They must also take personal climate actions, like switching to wind (through their utility) or solar power and be willing to talk about why they made the switch.

See www.ASES.org/conference for more information from the conference.