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E.ON Climate & Renewables North America, LLC

RETI 2 Western Outreach
Las Vegas Workshop

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E.ON Overview

- E.ON Climate & Renewables North America is a wholly owned subsidiary of E.ON SE
- E.ON is one of the world's largest utilities and power generation companies
- Since 2008 E.ON has invested over $10 billion in more than 5 GWs of solar, wind and battery storage across the US and Europe
- In the US we have developed and operate over 3,100 MWs of solar, wind and battery storage
- We are building our first combined battery storage and solar PV project in the US (10 MW-ac / 2 MW solar PV) under a tolling agreement with Tucson Electric Power with an expected COD of late spring 2017

E.ON North America Footprint

Renewable Demand in California

As California goes…..

- Traditionally the majority of the renewable activity in California has been driven by the RPS mandates
- Based on recent August 2016 draft CPUC filings by the IOUs, their demand may be slowing:
  - SDG&E isn't forecasting net short till 2036
  - PG&E and SoCal Edison won't be net short till 2026 - 2027 (this does not consider Diablo retirement)
- However, the drop in demand by the IOUs will likely be offset by the growth of Community Choice Aggregation and C&I
- Municipal utility procurement has slowed in recent years and several are waiting for more clarity on SB 350 requirements
- Energy service providers generally only procure 2 – 3 years ahead

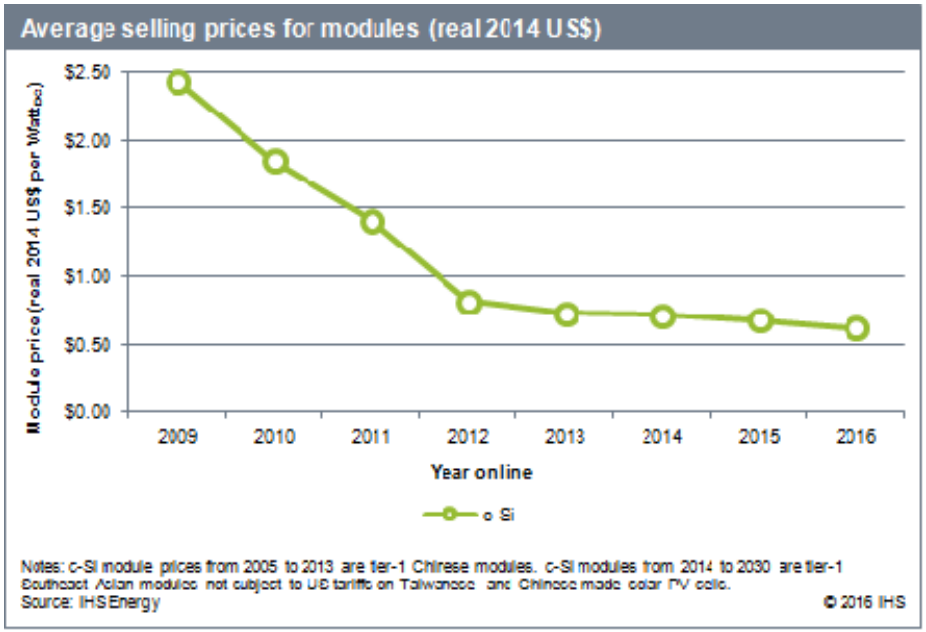
Renewable Demand Outside California

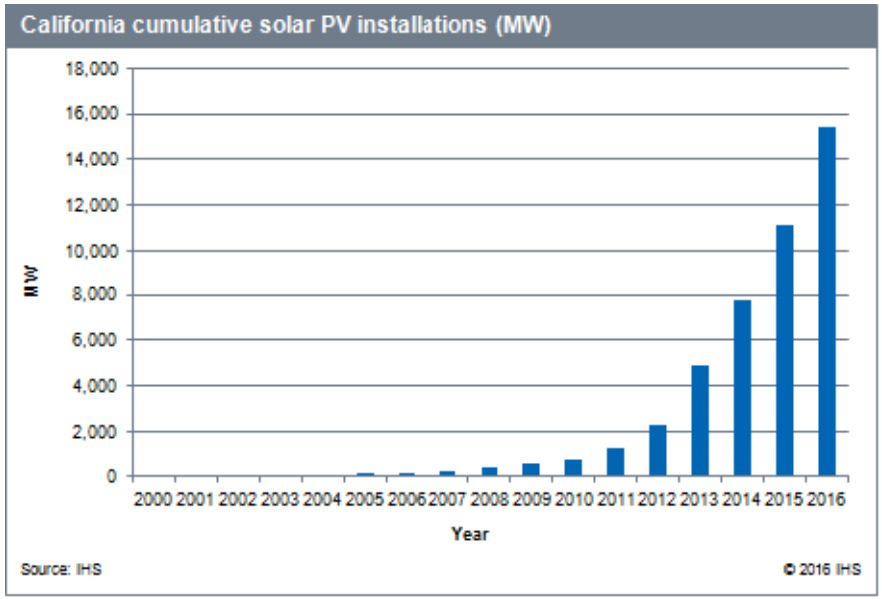
- Most of the state RPS requirements have been met by the IOUs in AZ, NM, CO, WA, NV
- Oregon just increased RPS to 50%
- Chair of the Arizona ACC has opened a new docket to consider raising RPS to 30% by 2030
- Some C&I activity but trend seems to be more along the lines of green rider structure
- Xcel/PSCo ERP proposes generation replacement with heavy renewable content
- PURPA driven demand is slowing down in ID and UT due to recent rule changes petitioned by the IOUs

Renewable Supply in the West

- Wind
  - This has historically been more of a PacNW story although there are some re-powerings underway in California and a few projects near Four Corners that have been built recently
  - Growing interest in wind to balance out solar heavy portfolios and to take advantage of transmission capacity from retiring coal plants (likely regional play outside California)
- Solar
  - Solar has captured largest share of capacity additions in California in the last 2 yrs and now accounts for ~ 17% of total nameplate capacity in the state
  - Solar growth is a direct result of drop in costs and ease in siting/development compared to wind

Decreasing solar capex driving installations





What are the implications of all of this?

- We expect solar to be the leading renewable resource throughout the west due to site availability
- Both wind & solar are being more driven by cost rather than RPS
- With growing carbon reduction goals in the West, there are questions that need to be addressed:
  - Based on its versatility in size, location and application, what grid services can solar provide?
  - Instead of being a net importer of hydro, will CA be a net exporter of cheap solar?
  - Will *policies* or *markets* determine winners and losers?
  - Can greater regional coordination and planning with forums such as this help address the issues noted above?

Thank You

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