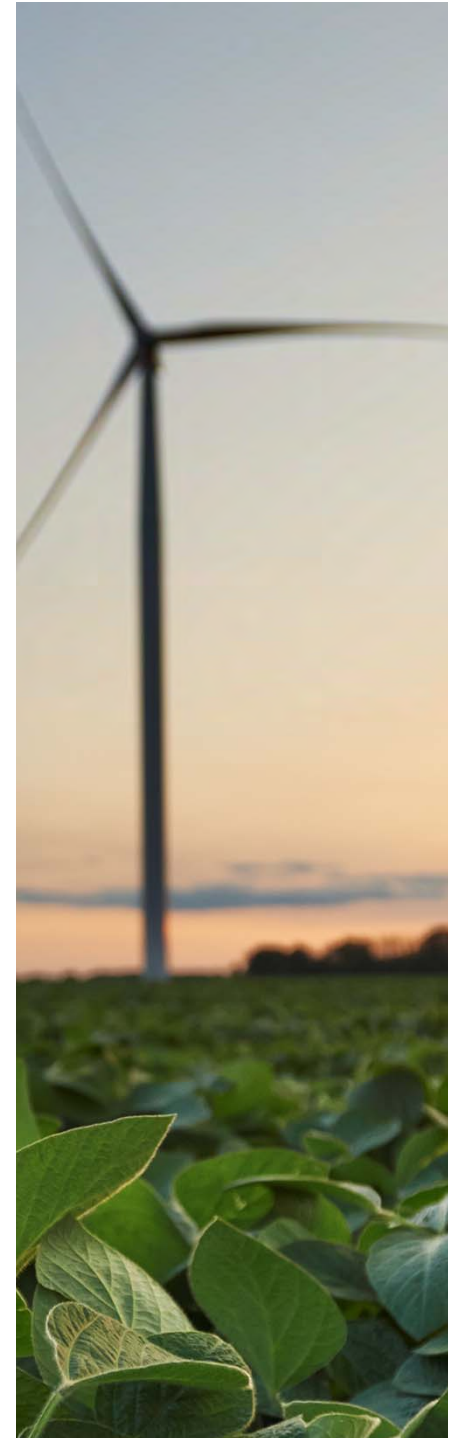




Elody Samuelson

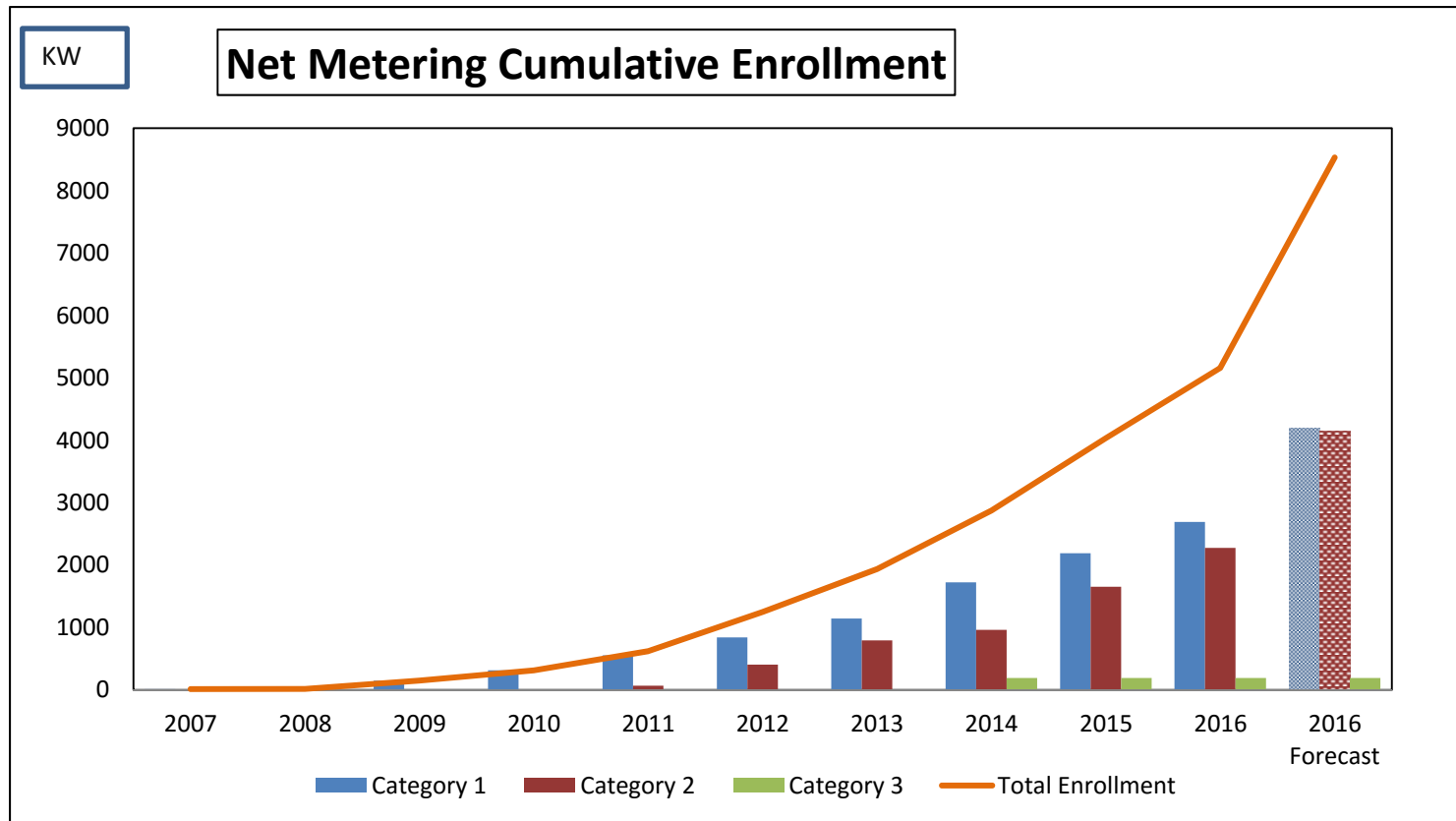
April 18, 2016



Behind the Meter Storage

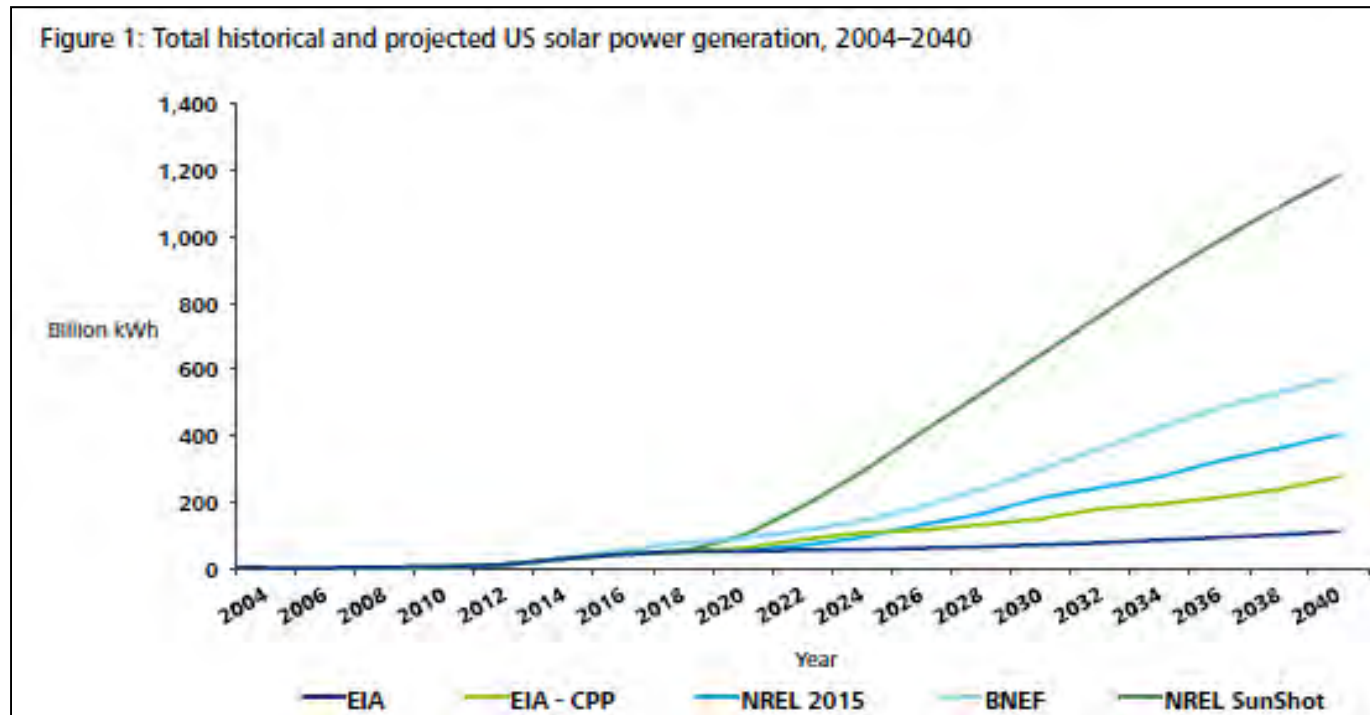
- Utility Considerations

- How and when do we start to track batteries?



Behind the Meter Storage

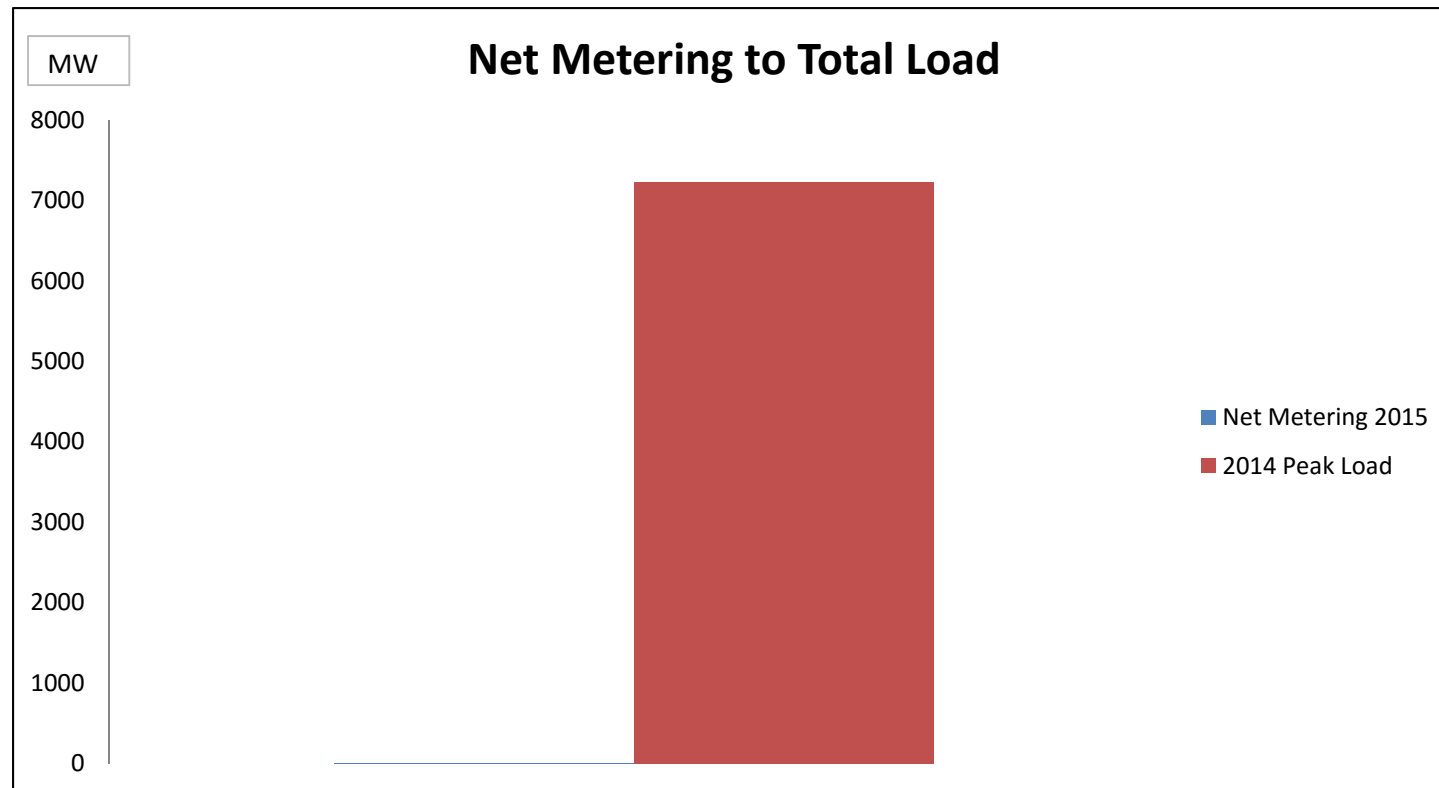
- Utility Considerations
 - When will the volume be meaningful?



<http://www2.deloitte.com/us/en/pages/energy-and-resources/articles/us-solar-power-growth-through-2040.html>

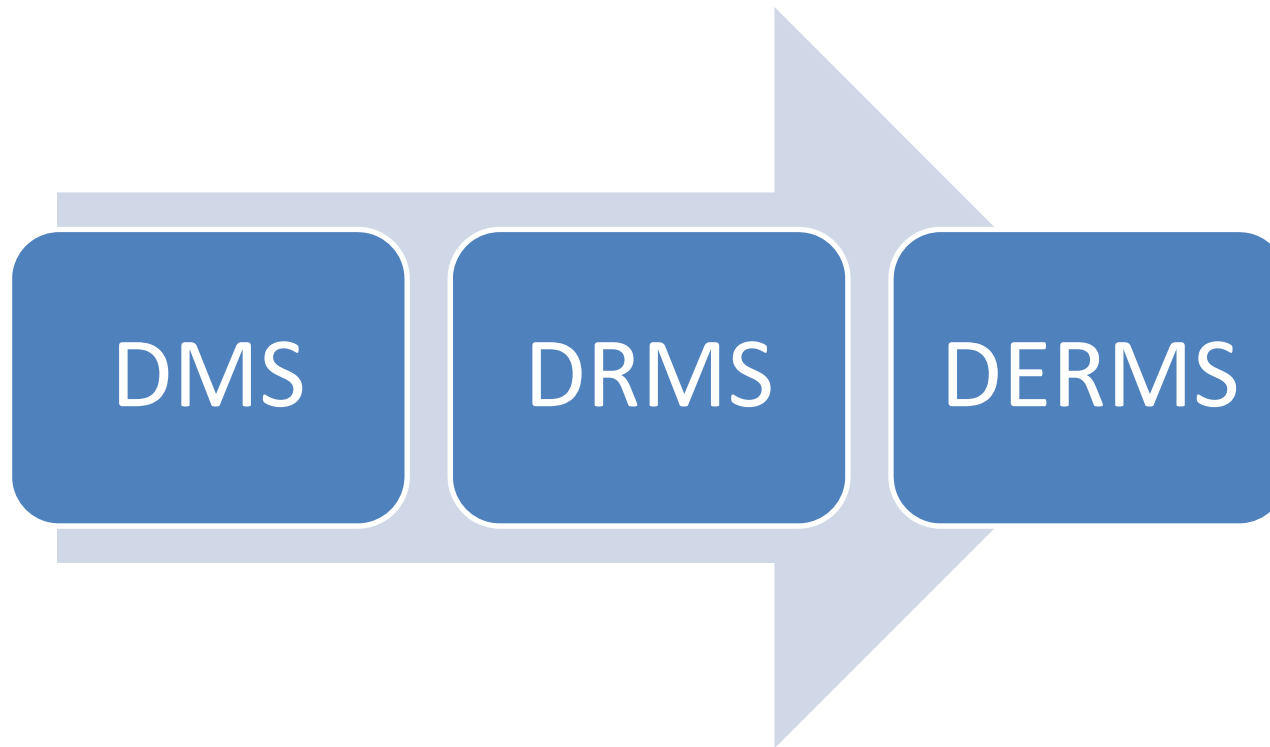
Behind the Meter Storage

- Utility Considerations
 - When will the volume be meaningful?

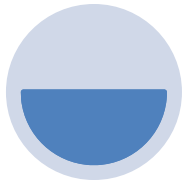


Behind the Meter Storage

- Utility Considerations
 - How can batteries be integrated into our system cost-effectively?

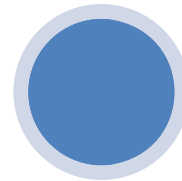


- Utility Considerations
 - What disruptive technologies provide opportunities and challenges?
 - Customer or utility ownership and/or control?
 - Price signal or direct load control?
 - Demand response value differs by time to deploy
 - Do electric vehicles and smart appliances increase or decrease storage potential for the grid?
 - Service contracts or financing opportunities for utilities?



Threats

- Demand destruction
- Cost shifting
- System reliability
- Brand attribution/customer relationship



Opportunities

- Improved customer satisfaction
- Clean products and services
- New revenue opportunities
- Investment opportunities in renewables