



DOE EAC Smart Grid Subcommittee Report

Activities and Plans

Presented by: Wanda Reder, Smart Grid Sub-Committee Chair

Electricity Advisory Committee Meeting
September 29, 2015

Smart Grid Subcommittee Plans



- ▶ National Strategy for Distributed Energy Storage
 - Joint sponsorship: Smart Grid / Energy Storage
 - Status report by Carlos Coe
 - Deliverable in Fall, 2015

- ▶ ARRA Accomplishments and Recommendations
 - Sponsored by Smart Grid
 - Seeking final approval

- ▶ Discussion on topics for 2016

ARRA Work Product

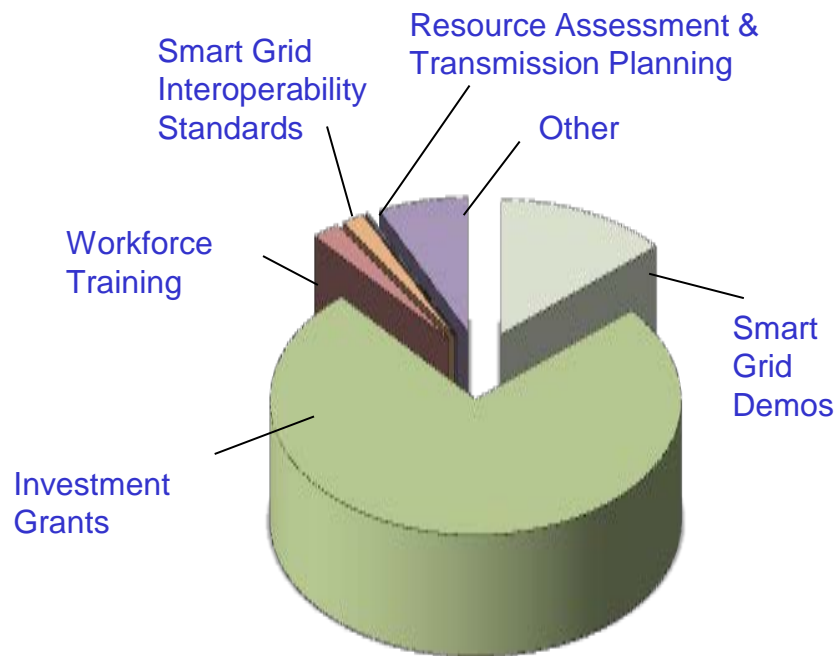


- ▶ **Membership:**
 - Wanda Reder, Marilyn Brown, Sonny Popowsky, Bob Curry, Paul Hudson, Craig Miller (NRECA), Michael Worden (DPS), and Joe Paladino (DOE)

- ▶ **Scope:**
 - Reflections of ARRA activity enacted by Congress in 2009

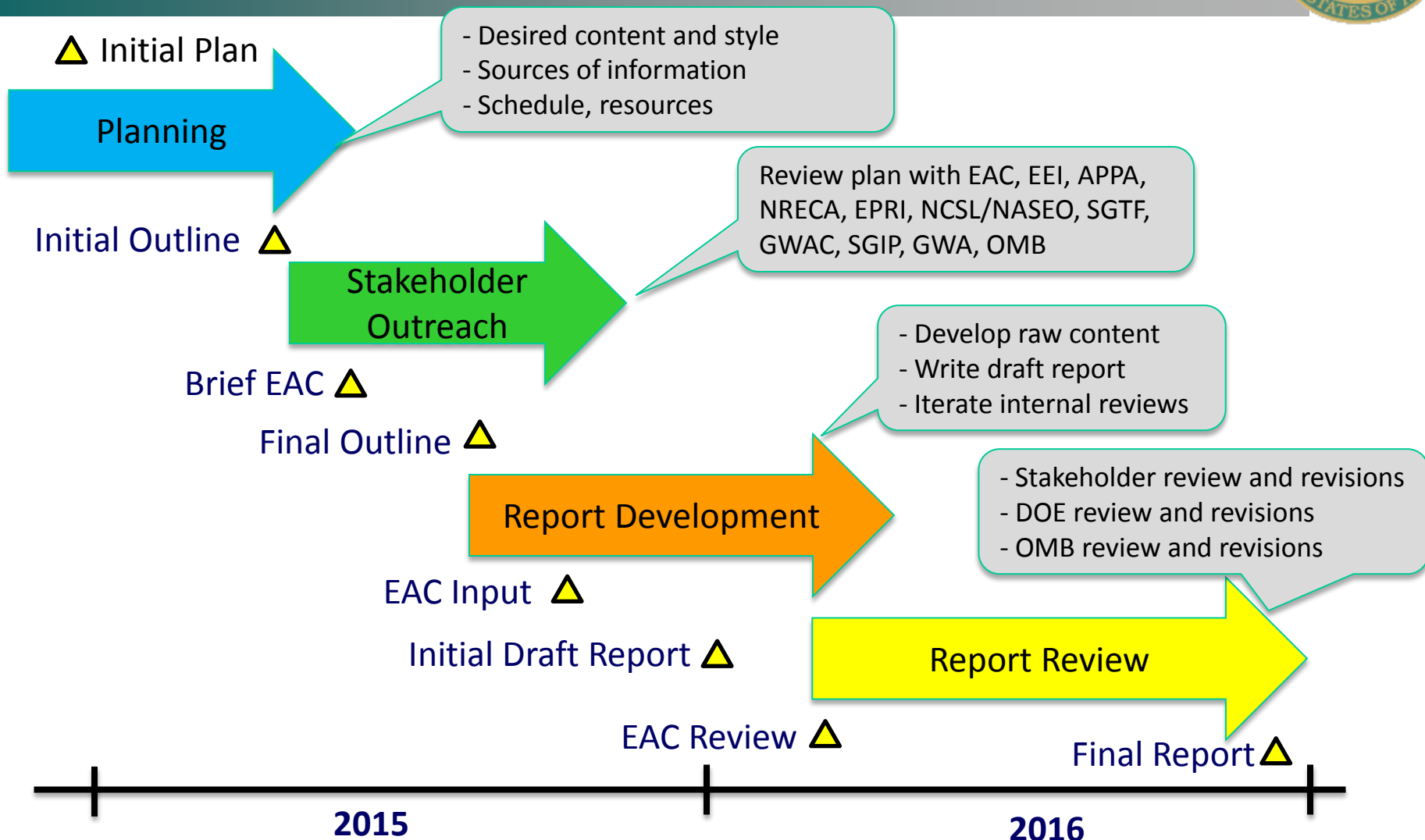
- ▶ **Objective:**
 - Augment the Smart Grid Systems Report

One-time Appropriation \$4.5B of Recovery Act Funds



Source: US Department of Energy Office of Electricity and Energy Reliability: Results and Findings from the ARRA Smart Grid Projects, May 2013

SGSR Schedule



Provided by Joe Paladino - DOE

ARRA Accomplishments, Recommendations



► Outline

1. Background and Purpose
2. Power System Transformation
3. Current Status of Smart Grid Deployment and Lessons from ARRA Program
4. Recommendations and Future Steps
 - Capability enhancement
 - Technology Performance Improvements
 - Further Development of the Business Case and Institutional Support
 - Systems Integration
5. Summary

► Move to approve

Proposed Action



► Move to approve with the following insert

The GridWise Alliance published the Grid Modernization Index report in July, 2013 which included a ranking of states' grid modernization efforts in the United States. Information was collected from 41 states and the District of Columbia to create a scorecard using a clearly defined set of criteria that incorporated policy, customer engagement and grid operation components. The objective was to evaluate and convey the progress and impacts of this transformative set of improvements to the nation's electric infrastructure. Analysis of the survey results revealed several key observations, one of which was a high positive and statistically significant correlation between states that received ARRA Smart Grid Investment Grants and the scoring across all three components. This is further evidence that the ARRA Smart Grid Investment Grants significantly influenced the rate of electric infrastructure transformation and substantially improved grid modernization preparedness.

► Discussion

Future work products



- ▶ June meeting proposed two future work products :
 - ***Reflections on EPA Clean Power Plan 111(d)***
 - Decided not to pursue at that time

 - ***Microgrid work product***
 - Decided not to create a separate work product due to limited interest
 - Proposed to incorporate with Grid Modernization
 - Determined it will not fit in that scope in 2016

Future work products



- ▶ Other work product ideas:
 - ***Internet of Things for electric*** would include far ranging vision, possible applications, achieving true “plug and play”, big data implications, and recommendation. Possible panels are:
 - “Plug and Play and Really Mean It”
 - Managing Big Data and the Implications
 - ***Development of markets at the Distribution level*** to include models, control and dispatch of Distributed Resources, Architecture needed, recommended actions
- ▶ Discussion? Which are most valuable? Next steps?