

# **The Integrated Grid** *A Transformation of the Power System*



**Robert Chapman**  
Vice-President, EPRI

**July 30, 2015**

# Introducing EPRI

## Independent

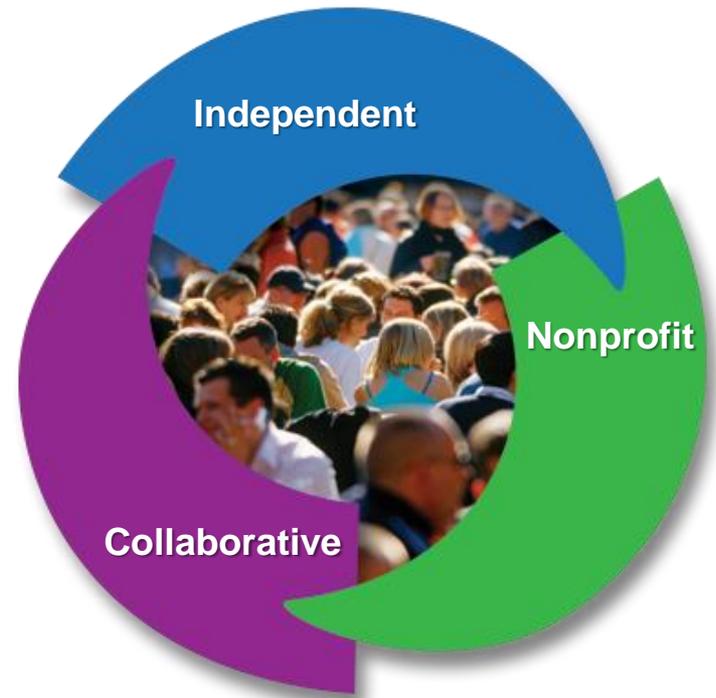
Objective, scientifically based results address reliability, efficiency, affordability, health, safety and the environment

## Nonprofit

Chartered to serve the public benefit

## Collaborative

Bring together scientists, engineers, academic researchers, industry experts

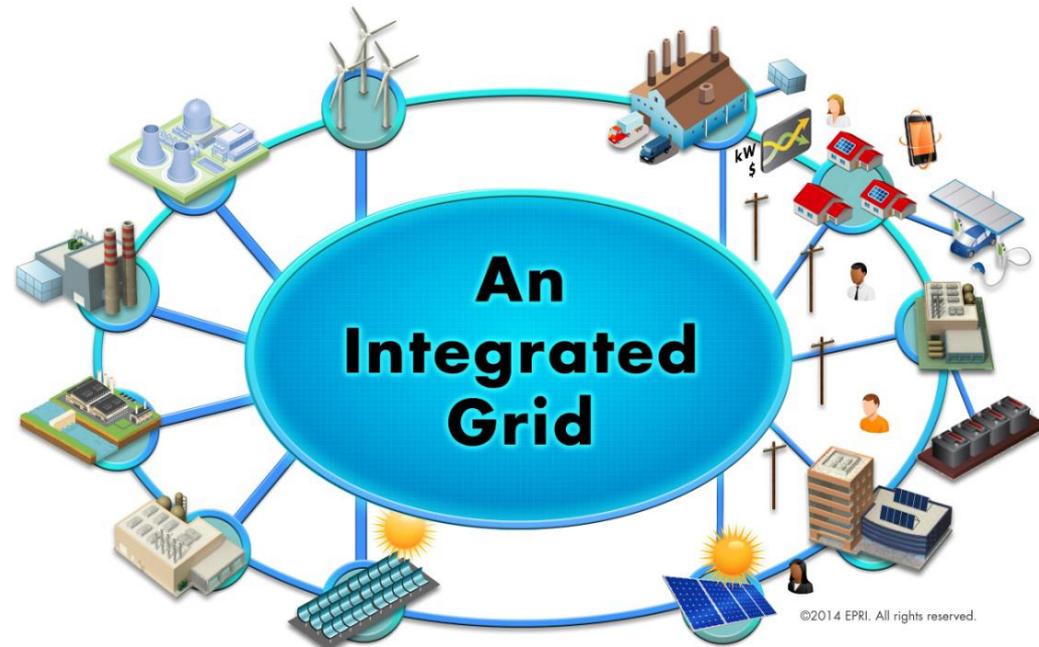




# Vision of an Integrated Grid...

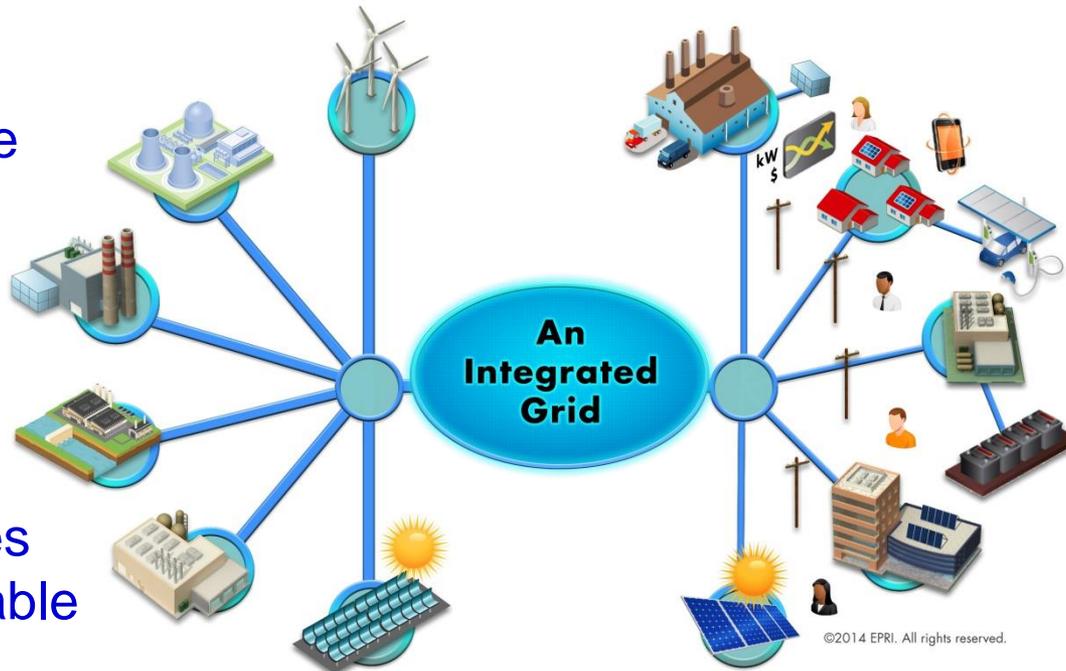
*The Integrated Grid...is the nerve center of a dynamic power system that...*

- Maximizes the benefits of both central generation and distributed energy resources...
- Enables potentially valuable combinations along the electricity value chain...
- Affords greater flexibility and resiliency through shared ancillary services...



# The Power System – Looking Forward

- Generation Becomes More Flexible
- T & D Becomes More Controllable and Resilient



- Consumers Become Energy Producers
- Loads Become More Interactive and Dynamic

## Characteristics of a Dynamic Power System



# Together...Shaping the Future of Electricity