Meeting Future Energy Needs through DG

Renewable Energy

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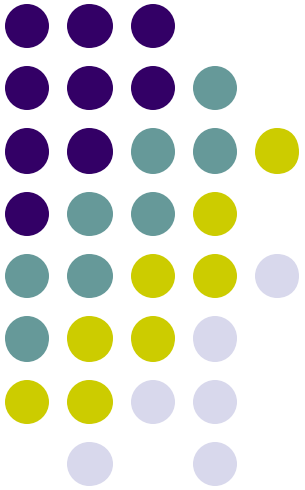
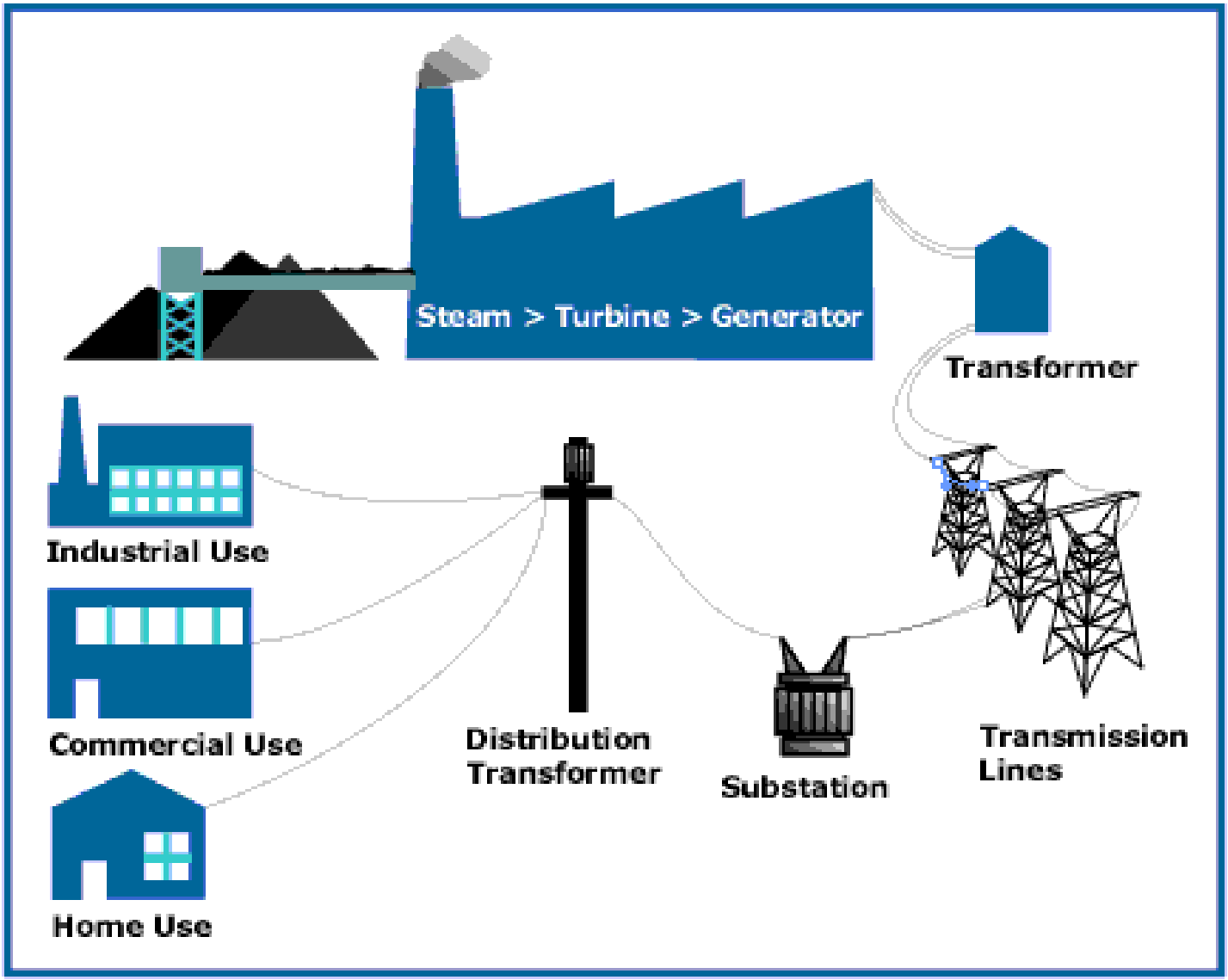
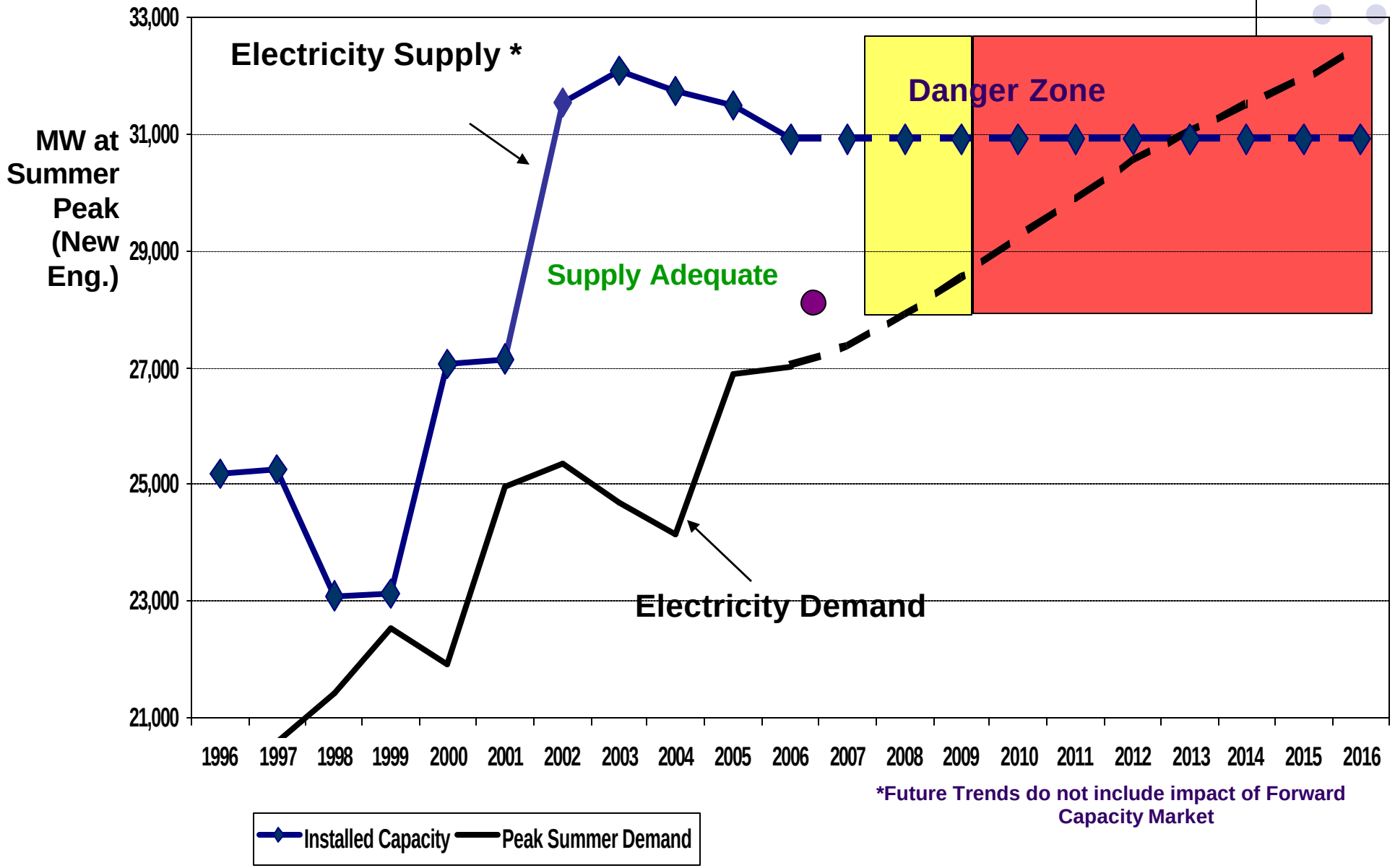


Overview of the Electricity Grid



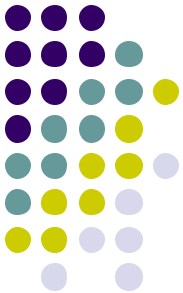
Source: Tennessee Valley Authority

The New England Electricity Problem



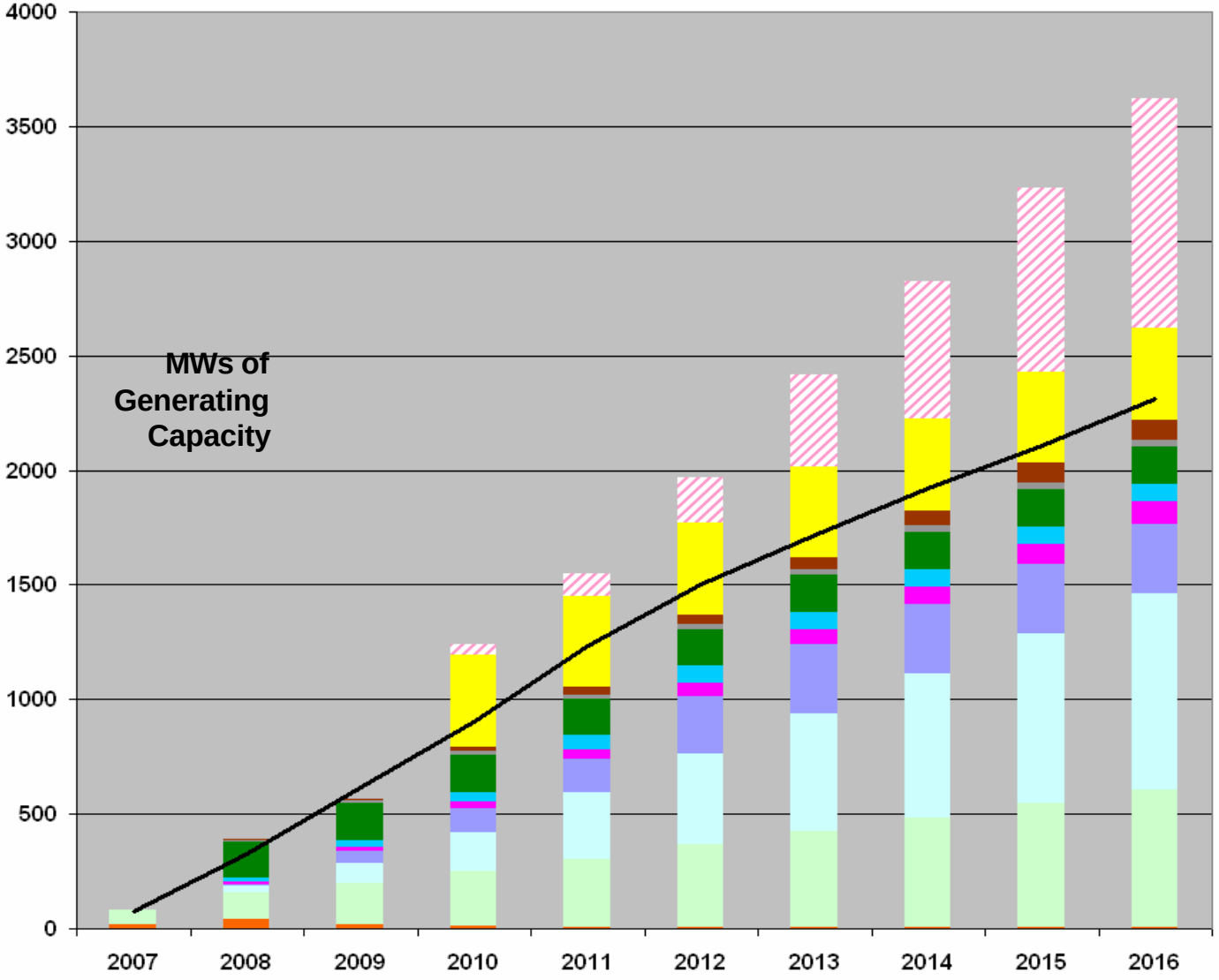
*Future Trends do not include impact of Forward Capacity Market

Option 1: New Power Plants



- Build several fossil-fuel, centralized power plants.
  - Proposals for Natural Gas, Coal and Oil plants in the pipeline throughout New England.
    - Proven Technologies
    - Experience Building
    - Big Generation
  - Also, several large BioMass and Wind projects.

Option 2: Governor Romney's Energy Plan to Address Problem



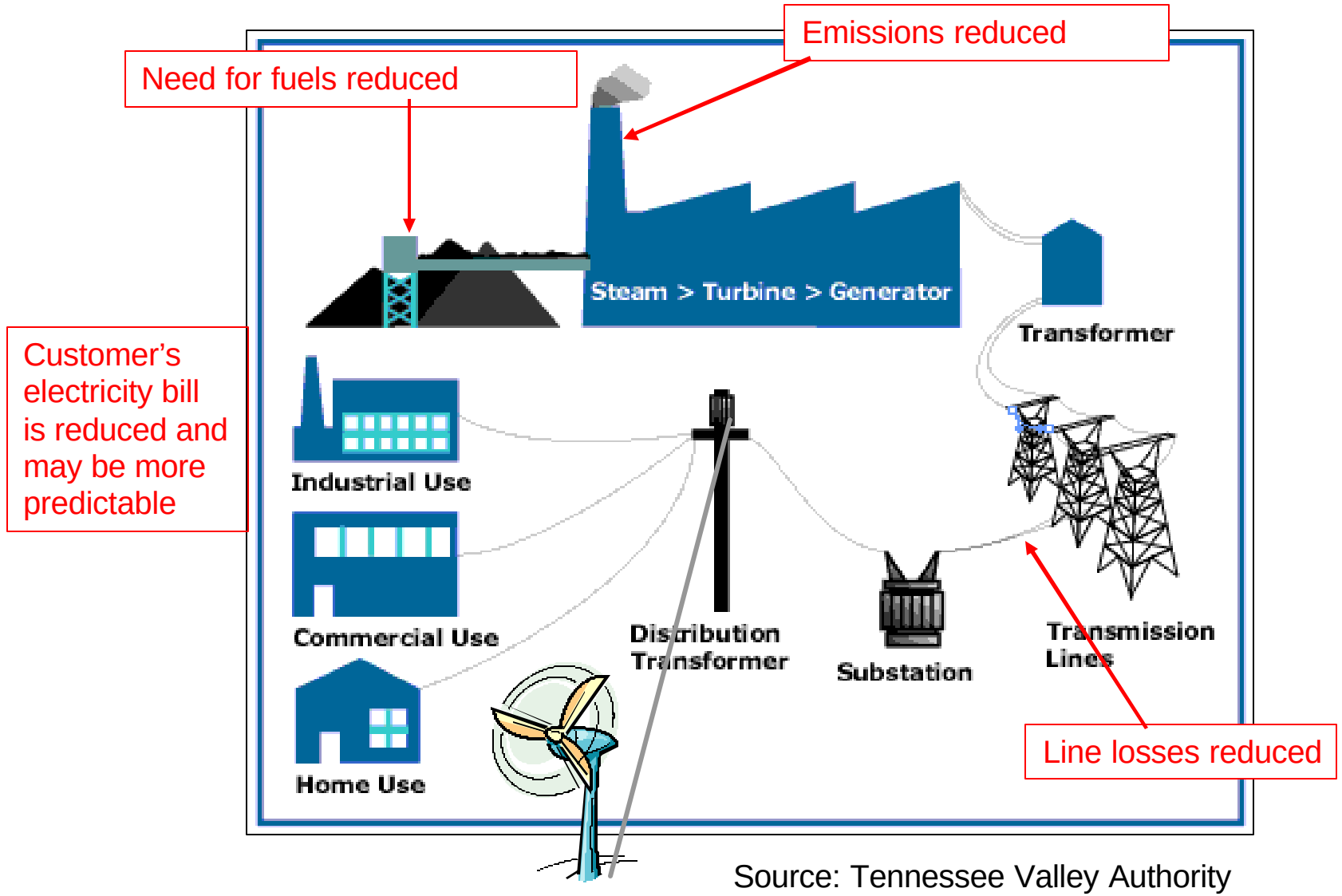
Megawatts Contributed by Energy Resources in the Plan

- Wind - Deepwater Offshore
- Dynamic Pricing - Sm Cust
- Wind - Shallow Water
- Wind on State Property
- Dynamic Pricing - Lg Cust
- Hydropower
- Wind - Accel. Private
- Biomass
- Efficiency Portfolio Std
- Distributed Generation
- Conservation Lottery
- Demand

- **1,423 MW of conservation**
- **1,198 MW of new generation***

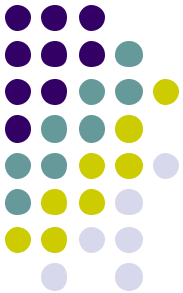
*** Generation does not include potential of Deepwater Offshore Wind**

Grid with Distributed Generation



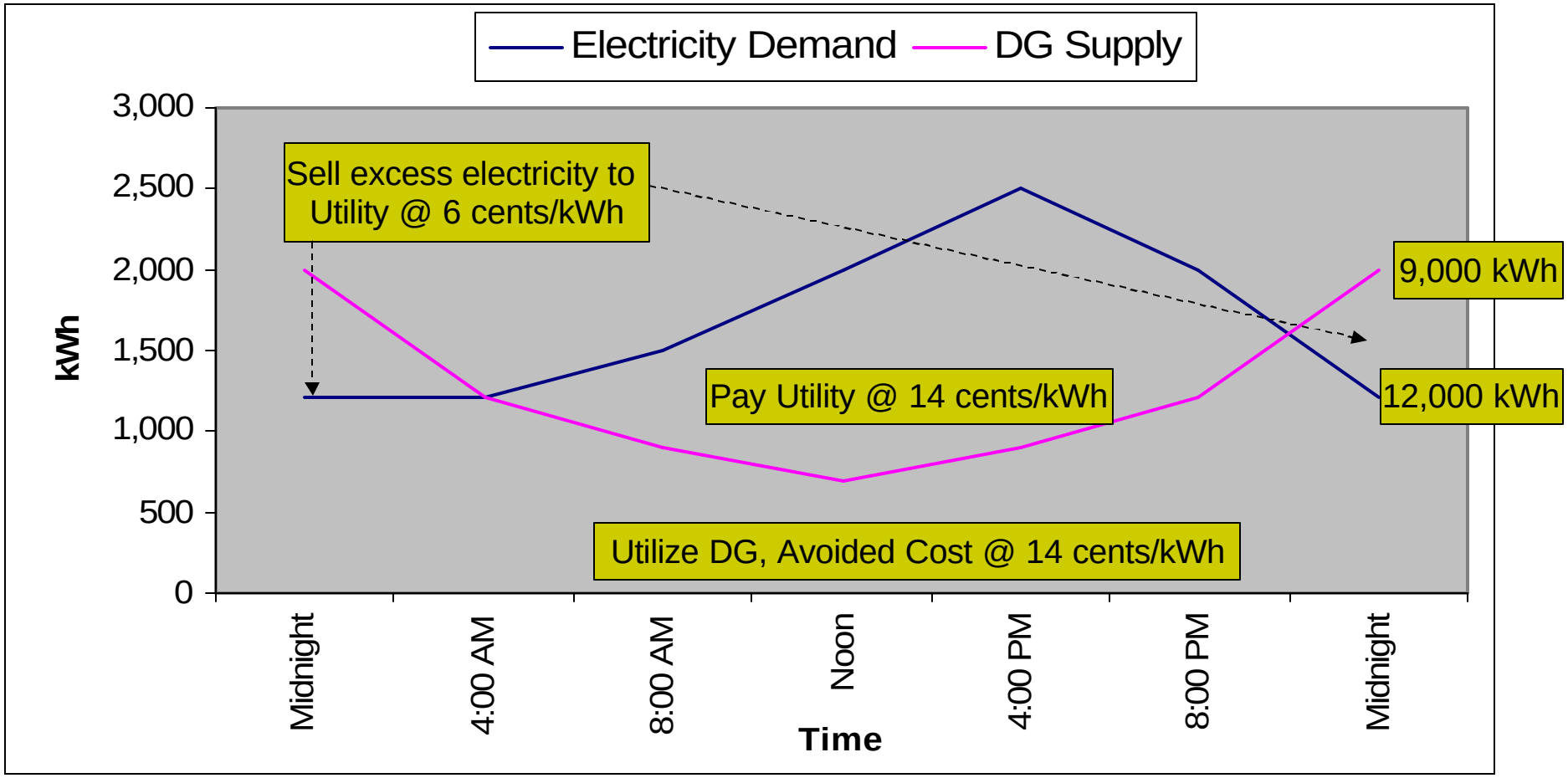
Source: Tennessee Valley Authority

Benefits of Renewable DG



- Energy Independence
- Quick Construction
- Reduced Emissions
- Reduced Transmission Losses
- Long-term price stability
- Economical
  - Avoided costs to utilities
  - Renewable Energy Certificate revenue
  - Forward Capacity Payment revenue

Economics of DG (Example)



MA Maritime Academy Wind Turbine

.66 MW Turbine located on Campus in Bourne

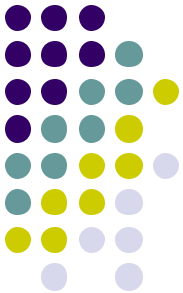
- Annual Output: 1,461,746 kWh or 28% of campus demand
- 82% of power used on site
- Estimated first year savings:

$168,100

- Payback: 7.5 years

Source: MA Maritime Academy

How do Renewable DG Projects Compliment Smart Growth?



Option 1: Power Plants

- Increased Emissions
- Land disruption
- Extraction & Transport of raw materials
- Transmission inefficiencies
- Economic value claimed by 3rd party
- Longer construction

Option 2: Renewable DG

- Reduced emissions
- More siting options
- Reduced raw materials Extraction & Transport
- More efficient
- Economic value claimed by customer
- Faster construction
- Energy independence