



OHIO DEPARTMENT OF TRANSPORTATION

TED STRICKLAND, OHIO GOVERNOR

JOLENE M. MOLITORIS, ODOT DIRECTOR



**ODOT's Gateway Rest Area Green
Technology Demonstration Project**
October 19th, 2010

Office of Innovation, Partnerships, & Energy

Background

- Established in 2009 out of the Ohio's 21st Century Priorities Task Force recommendations

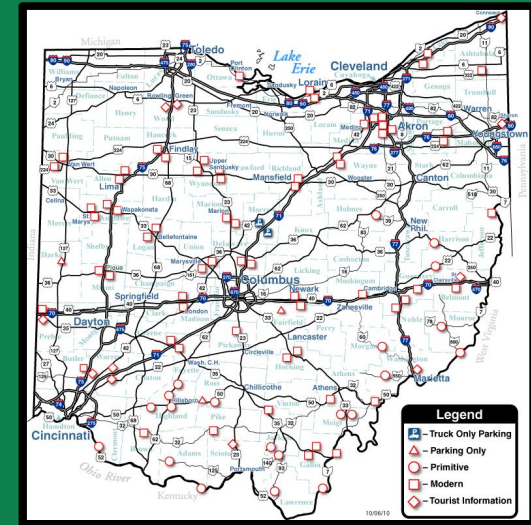
ODOT 2010 – 2011 Business Plan Initiatives

- “The Office of Innovation, Partnerships, & Energy is charged with exploring and implementing new transportation technologies, policies, and public-private partnerships”*
- “Launch pilot projects on department real-estate to evaluate renewable energy technologies (wind, solar, etc.) and determine the feasibility of reducing operating costs or generating revenue”*



Challenges

- “ ODOT currently owns and operates 105 rest areas that support approximately **58 million travelers annually**
- “ ODOT spends approximately **\$12 million of gas tax revenue** annually to operate these facilities
- “ Reduced gas tax revenue
- “ Ohio ozone nonattainment areas
- “ Federal Motor Carrier Safety Administration Hours-of-Service (HOS) regulations



Objective

To develop an ODOT Rest Area alternative energy strategy that will









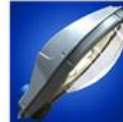






- . **Reduce** annual operating expenses
- . **Decrease** ODOT's carbon footprint
- . **Improve** Ohio's air quality
- . **Create** green+jobs within the state



Technology Matrix

ODOT's Gateway Rest Area Green Technology Demonstration Project

Sunday, April 11, 2010

REST AREA LOCATIONS "Gateway Rest Areas"	Ashtabula County 	Belmont County 	Wood County 
FACILITY ENERGY REDUCTION TECHNOLOGIES	<p>LED Lighting  Induction Lighting </p>	<p>LED Lighting  Induction Lighting </p>	<p>LED Lighting  Induction Lighting </p>
VEHICLE EMISSION REDUCTION TECHNOLOGIES	<p>Truck Electrification </p>	<p>PHEV Charging Stations </p>	<p>Truck Electrification </p>
ALTERNATIVE ENERGY SOURCE	<p>Wind Turbine </p>	<p>Solar Array </p>	<p>Wind Turbine </p>

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Electrified Transportation

Truck Electrification Station (TES)

- “ Stops diesel idling and fuel waste
- “ Reduces toxic diesel emissions . CO2, NOx, and PM
- “ Provides truck operators with a safe and environmentally friendly mechanism to comply with the law



Plug-in Electric Vehicle Charging Stations

- “ Zero emissions & CO2 when renewable energy sources are used
- “ Promotes fuel diversity and reduces the nation's dependency on fossil fuels
- “ Part of a statewide strategy aimed at integrating this new breed of vehicle and refueling infrastructure into the existing transportation network.



“Green” Power Source

Wind & Solar Energy

- “ Supports Ohio’s renewable energy portfolio standard (12.5% by 2025)
- “ Reduced energy consumption from the electrical grid; thus, a smaller ODOT carbon footprint
- “ Ability to evaluate renewable energy solutions that could ultimately be deployed on a larger scale
- “ Educational opportunity for the public



Ashtabula (I-90) Rendering



Gateway Rest Area "Green" Technology Project



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Value Proposition

Short Term

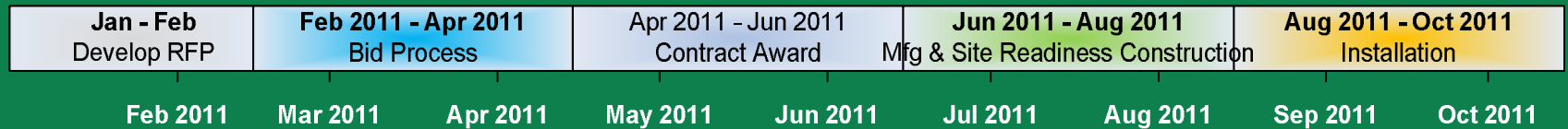
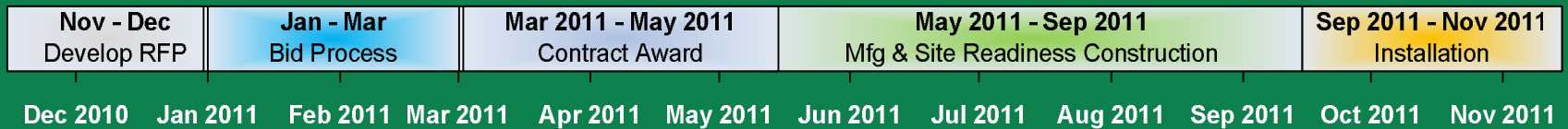
- “ Reduced operating expenses
- “ Evaluate viability of utilizing anti-idling equipment and renewable energy technologies at rest area facilities
- “ Environmental benefits (marginal)

Long Term

- “ Revenue generation opportunities from TES and renewable energy credits
- “ Large scale deployment of renewable energy technologies via Power Purchase Agreements (PPAs)
- “ Support a %green+economy in Ohio



Timeline



Gateway Rest Area "Green" Technology Project

