State of Knowledge and Practice: Opportunities for Intelligent Transportation Systems in the Energy Arena

Brooke Jordan, EnviroIssues with Jon Makler and Robert Bertini, Portland State University

ITS often overlooks energy benefits

- Safety and congestion have traditionally been the primary motivations
- Energy and environmental benefits could help ITS projects qualify for certain types of funds or programs

Energy policies value ITS applications

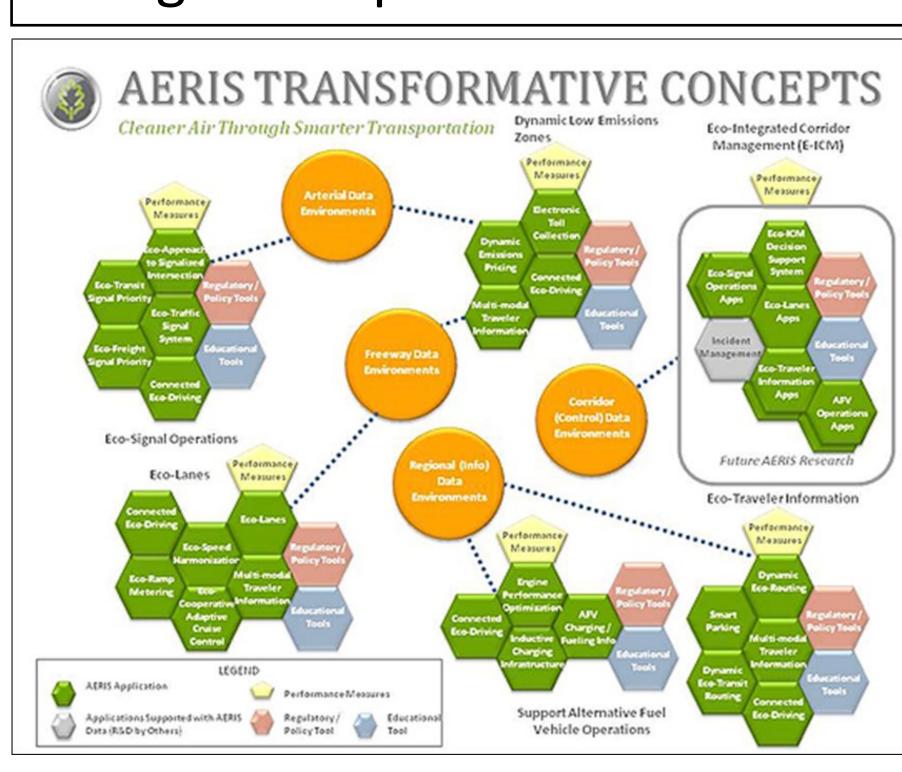
- ITS can help reduce delay
- ITS can help reduce VMT
- Staffing/operations investments may be superior to capital project

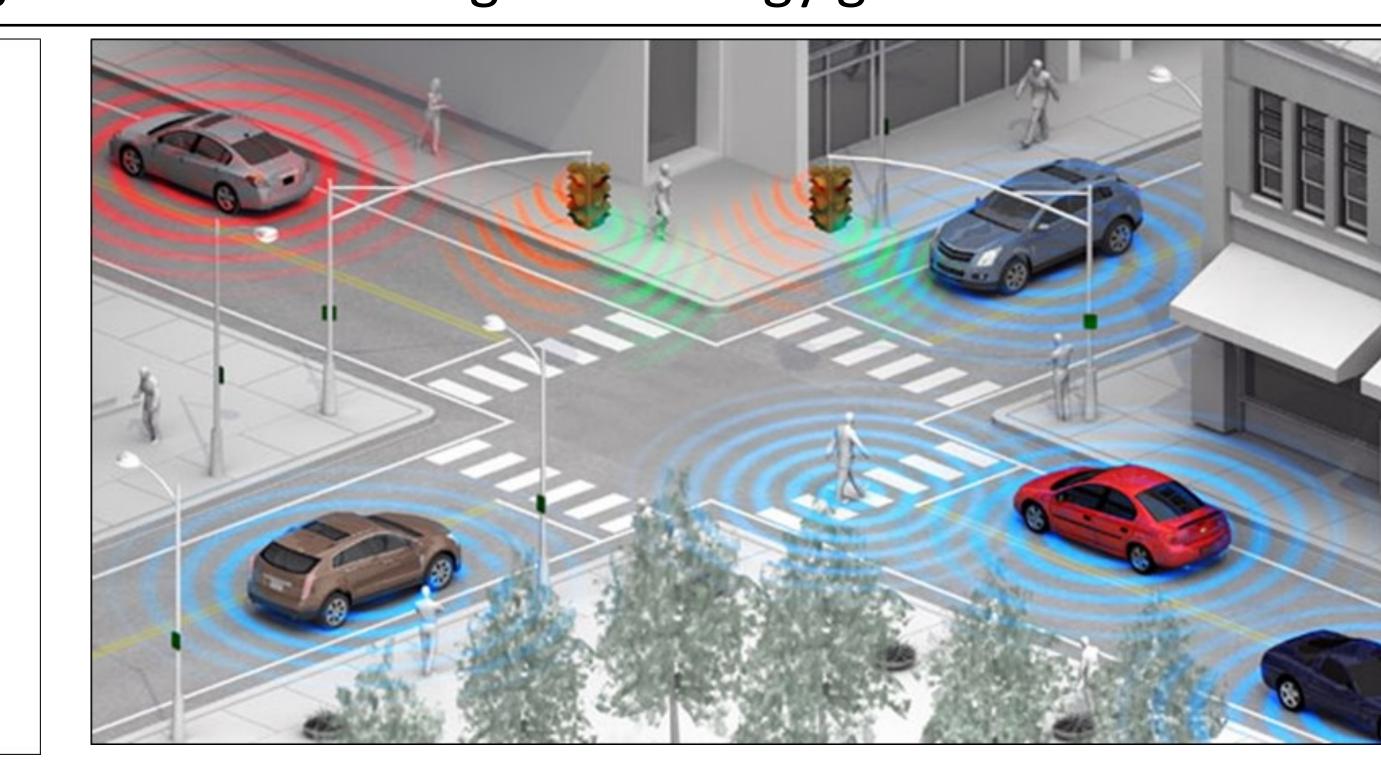
National Findings:

- 1.Reducing delay with ITS is achievable, but the benefits may be small.
- 2. Reducing VMT with ITS could have major benefits, but there is great uncertainty.
- 3. The energy benefits from ITS may depend on investments in staffing/operations rather than capital.

Connected Vehicles

- USDOT's AERIS program is highlighting environmental benefits of connected vehicles
- An energy-focused test-bed could document benefits for future deployments
- Oregon will pursue test-bed designation and funding with energy goals in mind





Conclusions

1. Catch 22

Limited documentation of energy benefits of ITS constrains future investments in energy-focused ITS projects.

2. Game changing connectivity

Connected vehicles enable significantly greater environmental benefits.

3. The price is right

The ascendance of road user fees and asset management are both conducive to energy-saving ITS deployments.

OREGON ACTION

Oregon's 10-Year Energy Action Plan Promotes ITS

- The plan identifies the accelerated deployment of ITS as an important near-term strategy.
- The plan identifies the deployment of electric vehicles as an important long-term strategy.

ITS is thoroughly deployed in Oregon

• The existing ITS infrastructure provides an established framework from which a more integrated system and environmental benefits can be achieved.

Regional Findings:

- 1. Oregon's political support for ITS is an advantage.
- 2. Oregon's existing deployment of ITS is an advantage.
- 3. If road pricing is essential, Oregon has a head start.
- 4. Fiscal constraints will continue to be a significant barrier to implementation.

Traffic Incident Management Training

- A basic operational strategy already sought by local agencies
- An opportunity to demonstrate energy benefits along with safety and mobility gains
- With FHWA help, Oregon has launched a statewide train-the-trainer TIM initiative





THE TEAM

Research Assistant: Brooke Jordan, EnviroIssues, bjordan@enviroissues.com
Project Manager: Jon Makler, AICP, Portland State University, makler@pdx.edu
Project Adviser: Robert Bertini, PhD, PE, Portland State University, bertini@pdx.edu

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