



# **The Case for Smart Planning in Pipeline Infrastructure Development**

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John Quigley  
Secretary, DEP



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**Pipeline Infrastructure Task Force**

## **Immense Economic Opportunity**

- PA energy
- PA manufacturing
- State, national energy security
- Air quality benefits
- Climate benefits



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## Impacts

- Environmental ...



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## TNC on Natural Gas Pipelines (2011)

- 8,600 miles of pipeline before Marcellus
- By 2030:
  - 12K to 27K miles new gathering lines
  - 60K to 150K acres forest cleared
- 360K–900K acres of new forest edges

<http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/pennsylvania/nq-pipelines.pdf>



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- Up to 6% of total PA forest cover, before 100s compressor stations
- Erosion and sedimentation issues
- Air emissions
- Landscape-level planning has strongest scientific support of BMP's  
TNC reviewed (2012)

<http://extension.psu.edu/natural-resources/natural-gas/webinars/evaluating-the-scientific-support-of-conservation-best-management-practices-bmps-for-shale-gas-extraction-in-the-appalachian-basin/evaluating-the-scientific-support-of-conservation-best-management-practices-for-shale-gas-extraction-in-the-appalachian-basin>



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## Impacts

- Other economic sectors
  - Agriculture
  - Timber
  - Outdoor recreation
- Communities
- Landowners
- Cultural, historic resources
- Aesthetics





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## **Our Challenge**

- Find the balance
- Find the win-wins



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## **Our Best Tool**

- Smart planning
  - Cross-sectoral support
  - Robust recommendations
  - Already being done by leaders in business, government





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## **Support for Smart Planning**

- Government agencies
- National and international NGOs
- National experts
- General public
- Investors



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## Governments, NGOs

- Shale Gas Subcommittee of Secretary of Energy Advisory Board:  
“The combination of impacts from multiple drilling and production operations, support infrastructure (pipelines, road networks, etc.) and related activities can overwhelm ecosystems and communities.”  
[http://www.shalegas.energy.gov/resources/081111\\_90\\_day\\_report.pdf](http://www.shalegas.energy.gov/resources/081111_90_day_report.pdf)
- International Energy Agency’s *Golden Rules for a Golden Age of Gas*:  
More sensitive environmental could yield overall cost savings of 5 percent for the gas industry  
[http://www.worldenergyoutlook.org/media/weowebiste/2012/goldenrules/WEO2012\\_GoldenRulesReport.pdf](http://www.worldenergyoutlook.org/media/weowebiste/2012/goldenrules/WEO2012_GoldenRulesReport.pdf)
- European Commission: Science-based characterization of important landscapes, habitats, and corridors to inform planning, prevention, mitigation and reclamation of surface impacts  
<http://ec.europa.eu/environment/integration/energy/pdf/fracking%20study.pdf>



## PA Marcellus Shale Advisory Commission (2011)

- Recommended that pipeline impacts be reduced by identifying legislative/regulatory changes needed to:
  - Effect sharing of pipeline capacity, reduce surface disturbance , associated environmental impacts
  - Encourage use of existing pipeline infrastructure, co-location with other rights-of-way
  - Achieve coordination, consistency of infrastructure planning and siting decisions by State, county, local governments
  - Provide sufficient authority, resources for appropriate government agencies to ensure that ecological and natural resource data are used in review and siting of proposed pipelines, to avoid or minimize impacts to these resources

[http://teampa.com/wp-content/uploads/2011/07/MSAC\\_FinalReport\\_Web.pdf](http://teampa.com/wp-content/uploads/2011/07/MSAC_FinalReport_Web.pdf)



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## **Report to the General Assembly on Pipeline Placement of Natural Gas Gathering Lines (PA Governor's Office, 2012)**

- Remove legal impediments to sharing state, local road rights-of-way with gathering lines to encourage use of existing corridors, reduce habitat fragmentation
- County planning offices should work with drillers, gathering line companies to maximize opportunities for shared rights-of-way
- Enhance the PA Natural Diversity Inventory review tool to assist gathering line developers in avoiding conflicts with threatened/ endangered species
- DEP should adopt environmental review standards for drilling proposals that avoid surface disturbances, impacts on sensitive lands, forest fragmentation, viewsheds, direct intersection with waterways



- County and municipal governments should be encouraged to consult with gathering line operators to better understand the implications of a proposed project on local comprehensive plans
- Pipeline operators should be encouraged to consult with appropriate experts to replant rights-of-way with vegetation that fosters habitat development for wildlife

[http://www.palwv.org/wp-content/uploads/2014/04/FINAL\\_REPORT.pdf](http://www.palwv.org/wp-content/uploads/2014/04/FINAL_REPORT.pdf)





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## National Experts

- Resources for the Future's *Pathways to Dialogue: What the Experts Say about the Environmental Risks of Shale Gas Development*, a 2013 survey of 256 shale gas experts from government agencies, industry, academia, and nongovernmental organizations “to identify the priority environmental risks related to shale gas development -- those for which the experts believe government regulation and/or voluntary industry practices are currently inadequate to protect the public or the environment”
  - 7 involve potential risks to surface water
  - 2 involve potential risks to air quality
  - 2 involve potential risks to groundwater
  - 1 is related to habitat disruption

[http://www.rff.org/Documents/RFF-Rpt-PathwaystoDialogue\\_FullReport.pdf](http://www.rff.org/Documents/RFF-Rpt-PathwaystoDialogue_FullReport.pdf)





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## The Public

- 2012 Bloomberg National Poll: 66% of Americans want more government oversight of fracking

<http://www.bloomberg.com/news/2012-12-14/tougher-fracking-regulations-backed-by-66-poll-shows.html>

- 2013 Poll by ORCInternational for Civil Society Institute and Environmental Working Group: 94% of Americans want to balance new energy production with protecting clean water and air

<http://www.civilsocietyinstitute.org/media/pdfs/011013%20CSI%20EWG%20ACEA%20survey%20report%20FINAL2.pdf>



## Investors

- 2011: 55 major investment organizations, institutional investors w/@ \$1 trillion in assets under management called for improved practice, including planning

<http://iehn.org/news.press.pressreleasetrillion5-16-12.php>

- 2013: 9 leading oil/gas companies faced shareholder actions calling for disclosure of the way they are managing, measuring risks of hydraulic fracturing, shale gas transmission -- specifically voicing support for comprehensive planning

<http://iehn.org/news.press.frackingpressrelease02-05-13.php>



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## The How – 7 examples

- U.S. Department of Interior Bureau of Land Management – drilling and surface use program  
[http://www.blm.gov/pgdata/etc/medialib/blm/mt/blm\\_programs/energy/oil\\_and\\_gas/policy.Par.15090.File.dat/03wom152.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/mt/blm_programs/energy/oil_and_gas/policy.Par.15090.File.dat/03wom152.pdf)
- Anadarko Petroleum's Greater Natural Buttes (UT) project – drilling in an environmentally-sensitive area  
[http://www.blm.gov/pgdata/etc/medialib/blm/ut/vernal\\_fo/planning/greater\\_natural\\_buttes/record\\_of\\_decision.Par.86388.File.dat/Cover ROD.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/ut/vernal_fo/planning/greater_natural_buttes/record_of_decision.Par.86388.File.dat/Cover_ROD.pdf)
- Colorado Department of Natural Resources – comprehensive drilling plans  
<http://www.oilandgasbmps.org/docs/What%20is%20a%20CDP.pdf>



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- American Petroleum Institute's *Practices for Mitigating Surface Impacts Associated with Hydraulic Fracturing* -  
[http://www.api.org/~media/Files/Policy/Exploration/HF3\\_e7.pdf](http://www.api.org/~media/Files/Policy/Exploration/HF3_e7.pdf)
- Det Norske Veritas' *Recommended Practice on Shale Gas Extraction*  
<http://exchange.dnv.com/publishing/Codes/download.asp?url=2013-01/rp-u301.pdf>
- Pennsylvania Department of Conservation and Natural Resources –  
landscape planning  
<http://extension.psu.edu/natural-resources/forests/private/training-and-workshops/2012-goddard-forum-oil-and-gas-impacts-on-forest-ecosystems/landscape-planning-public-lands-perspective>
- Maryland Department of the Environment  
<http://www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/SpecialProjects/Documents/Oil%20and%20gas%20reg%20proposal%20-%20MD%20Register%20notice%201-9-15.pdf>



## Summing up....

- Critical need for smart planning in development of shale gas resources
- Extensive support for it from all sectors
- Robust recommendations for it
- An emerging practice of it





PA has the opportunity to take a national leadership position in demonstrating how smart planning can achieve environmental, business, and community “win-wins” that will go a long way to ensuring responsible production and transmission of shale gas – and citizen acceptance of it.





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**Questions?**