

THE ENERGY/WATER NEXUS

OPPORTUNITY FOR TECHNOLOGY

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TRANSPORT FUEL

Oil Derived

- 60% Imported
- Production plateau in 10-15 years
 - 1.5% demand rate: cross-over in 2020
 - sustained price increase
- Oil substitutes needed

TRANSPORT FUEL

Oil Substitutes

- Biofuels
- Compressed Natural Gas
 - direct combustion in vehicles
- Electricity
 - electric vehicles

NATURAL GAS

Shift to Natural Gas requires

- Assured supply
- Moderate price
- Shale Gas enables both, but
 - has environmental issues, mostly involving water

WATER ISSUES IN OIL AND GAS

- 4 Trillion gallons “produced” water annually
- Shale Gas issues include
 - fresh water for fracturing fluid
 - water returns from fracturing fluid
 - produced water disposal
 - could limit exploitation of this resource
- Compelling value in solving the above

A SUSTAINABLE ENERGY FUTURE

NEEDS

INNOVATIVE WATER SOLUTIONS