



# Review of **SEN Canada 2013**


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# CONTEXT



See [wise.uwaterloo.ca/sen](http://wise.uwaterloo.ca/sen) : “Summary for Policy Makers”



# ADVISORY PANEL



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**Paul Murphy,**  
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**Shannon Joseph,**  
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**Jon Dogterom,**  
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**Tracey Forrest,**  
Director, *and*  
**Ian Rowlands,**  
Associate Director



# WHITE PAPERS



# DEFINITION



Smart energy networks (SENs) use advanced information and communication technology to monitor and manage the transport of energy from multiple fuel sources to meet the varying energy service demands of end users.

# CHARACTERISTICS



- i) Multiple Fuels
- ii) Information & Communication Technologies (ICT)
- iii) Energy Service Provision
- iv) Integration



# THE FUTURE OF SMART ENERGY NETWORKS:

Identifying, shaping and advancing Canadian energy interests

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Toronto, ON - September 30th 2013



UNIVERSITY OF  
**WATERLOO**



**uniongas**  
A Spectra Energy Company



 **Capgemini**  
CONSULTING. TECHNOLOGY. OUTSOURCING







# REFLECTIONS



## **Electricity, natural gas, heat**

- Heat energy critical contributor to Europe's energy services

## **Integration and storage**

- Temporal and spatial scales

## **ICT key differentiator**

## **Energy service 'value'**

## **Readily-accessible platform**

# R&D Sample Response 1/3



*‘costs and benefit  
calculations under different  
regulatory regimes and  
markets’*

# R&D Sample Response 2/3



*‘assess the business cases  
and prioritize.’*



# R&D Sample Response 3/3



***‘living laboratory-type of  
innovative demonstrations’***

# R&D Word Cloud



uncertainty  
living-laboratory  
cost-benefit-calculation  
demonstration  
business-case value  
commercializationprioritize

# KEY THEMES



## Diffuse Benefits

- Challenge to assemble critical mass of support

## State of Play

- High engagement at leadership event
- 'Cautious enthusiasm for more consideration of SENs'







# MOVING FORWARD



1. R,D&D National Workshop (Today!)
2. Demonstration Projects
3. 'Institutional' Strategy

# Thank you.





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