



## Letting go of the edge of the Grid

Nic Jacobson, Senior Engineer  
SEGRA 2014

# SEGRA 2014

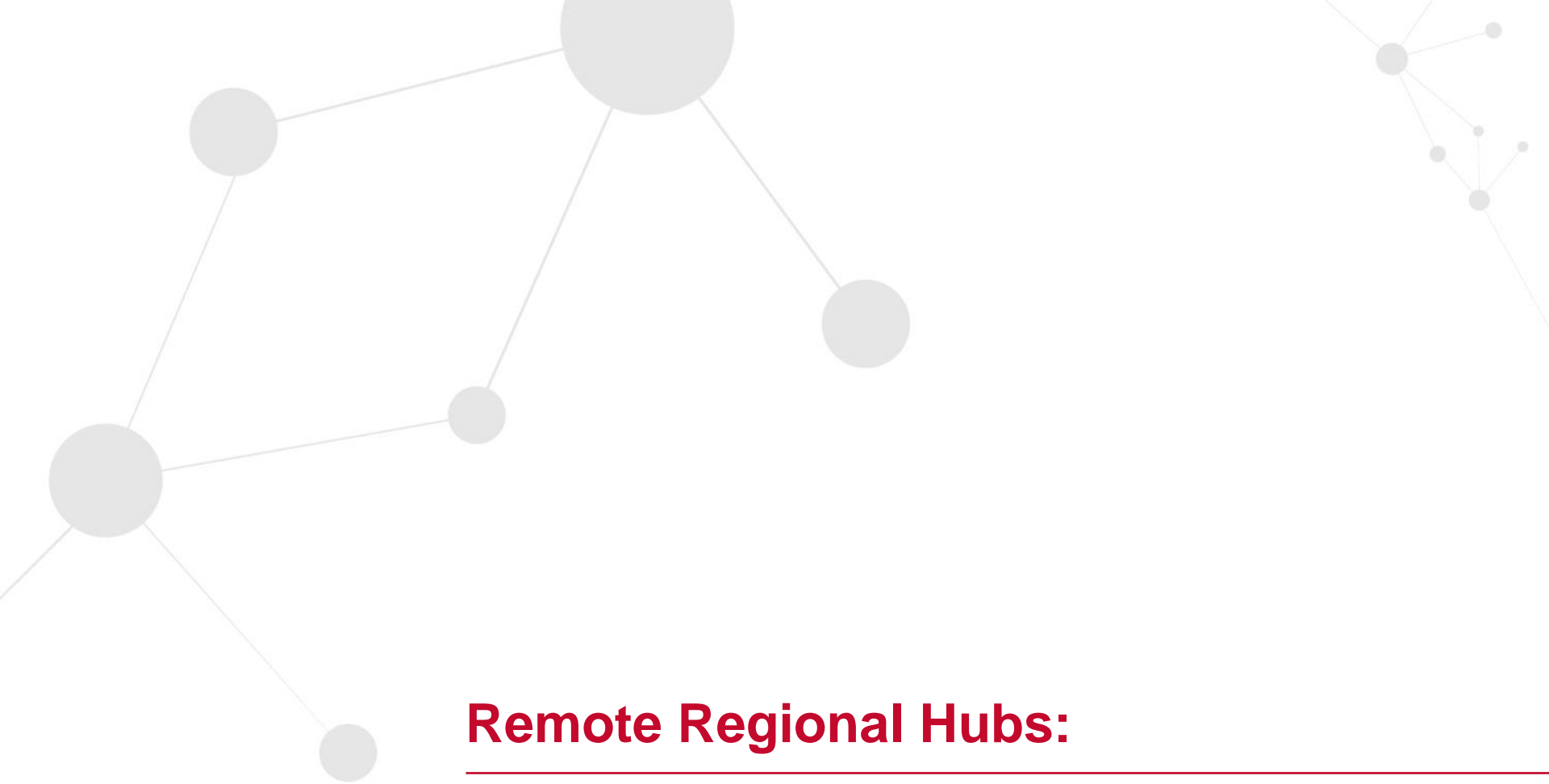
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## Critical issues at SEGRA 2014 include:

- Future opportunities for regional Australia;
- Megatrends and regional productive industries;
- Single industry and service towns' discussion.

## Key themes include:

1. Maximising industrial diversity and employment opportunities
2. Supporting liveability through health, education and amenity
3. *Sustainable utilities - energy and water*
4. Infrastructure through soft and hard networks



## Remote Regional Hubs:

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hubs and nodes

# Letting go of the edge of the Grid

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1. Electricity system and market background
2. Going off grid, a growing theme
3. What does it mean to let go?
4. How would it happen?
5. What is stopping communities letting go?
6. What next?

# The electricity system: hubs and nodes?

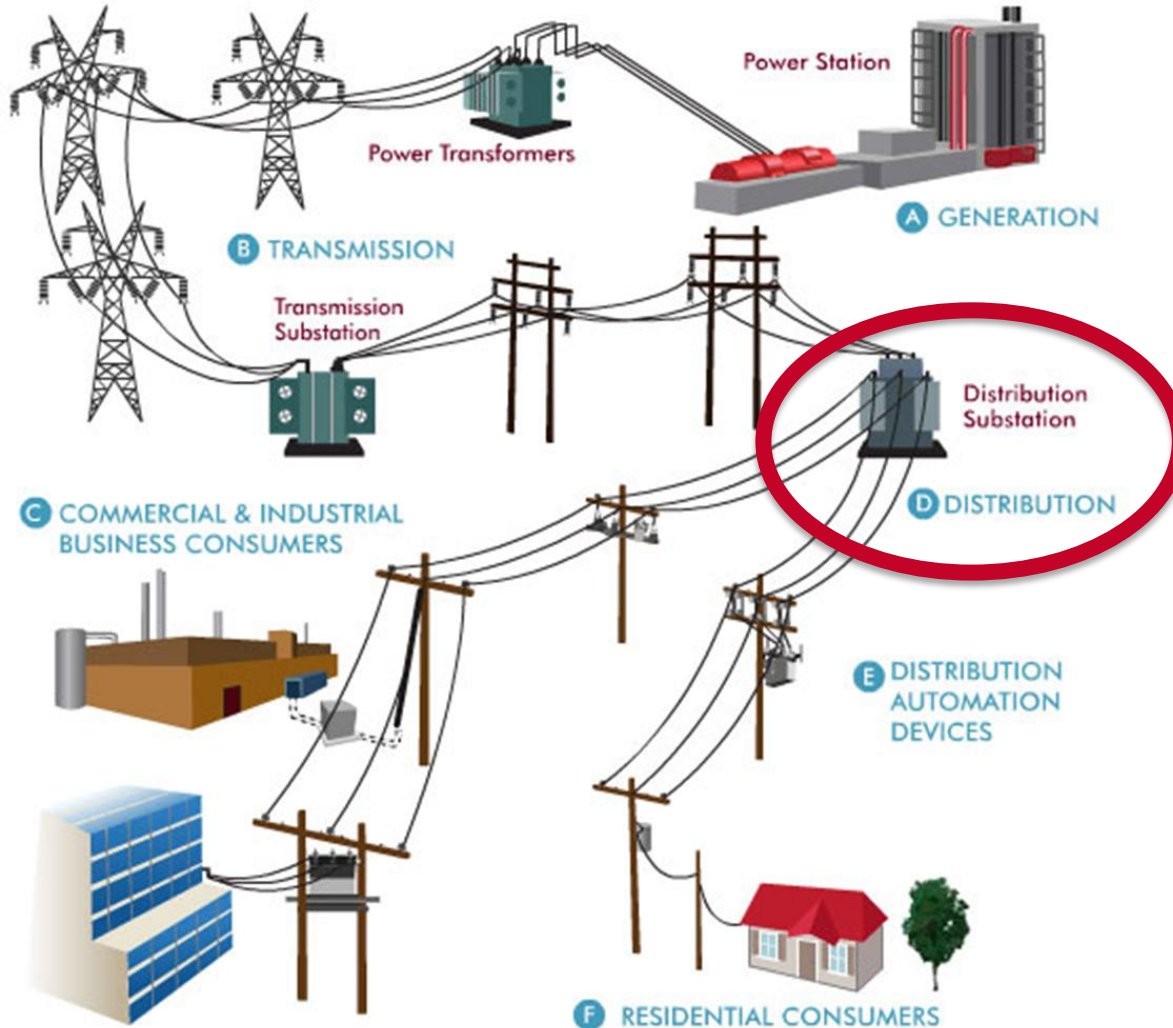
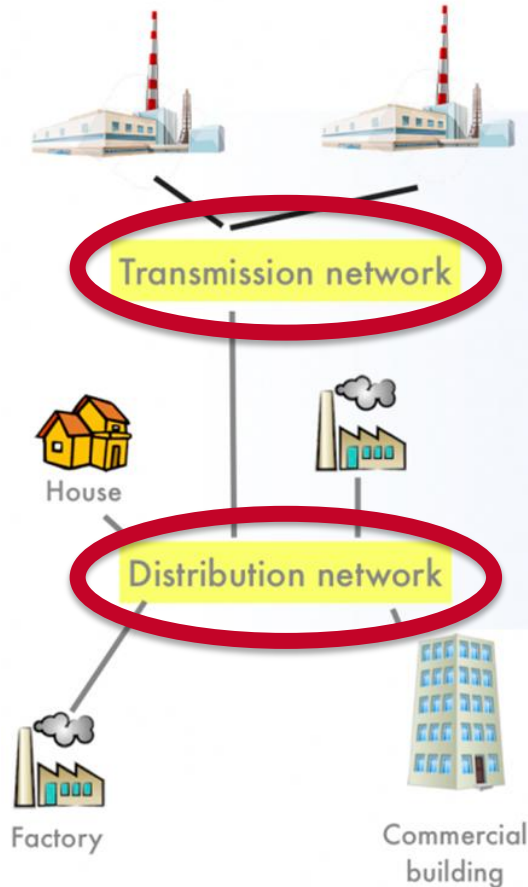


Image source: [http://altenergymag.com/emagazine.php?issue\\_number=09.04.01&article=smartgrid/](http://altenergymag.com/emagazine.php?issue_number=09.04.01&article=smartgrid/)

# The electricity system: changing structure

## Yesterday Centralized Power



## Tomorrow Clean, local power

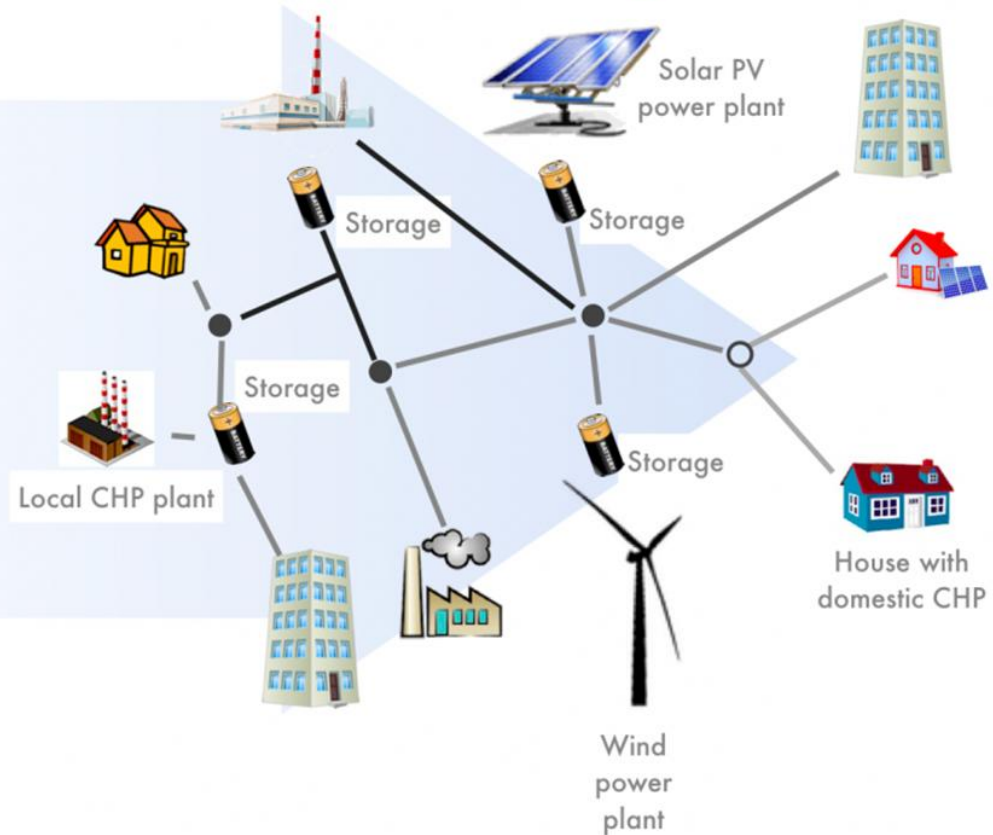


Image source: <http://cleantechnica.com/2011/08/23/why-we-should-democratize-the-electricity-system-part-1/>

# National Electricity Market

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## 4 main components

- Generators
- Retailers
- Network service providers
- Customers (also generators)

Was all State-owned, now mostly privatised

## Price increase drivers

- Aging assets
- Peak demand

# A growing theme

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- Industry, researchers and advocacy groups are talking about going off grid



- Households going off grid seen as next step
- Challenges to the existing business model
- Community renewable energy projects
- Community retailers
- Zero Net Energy Towns



# From on grid to off

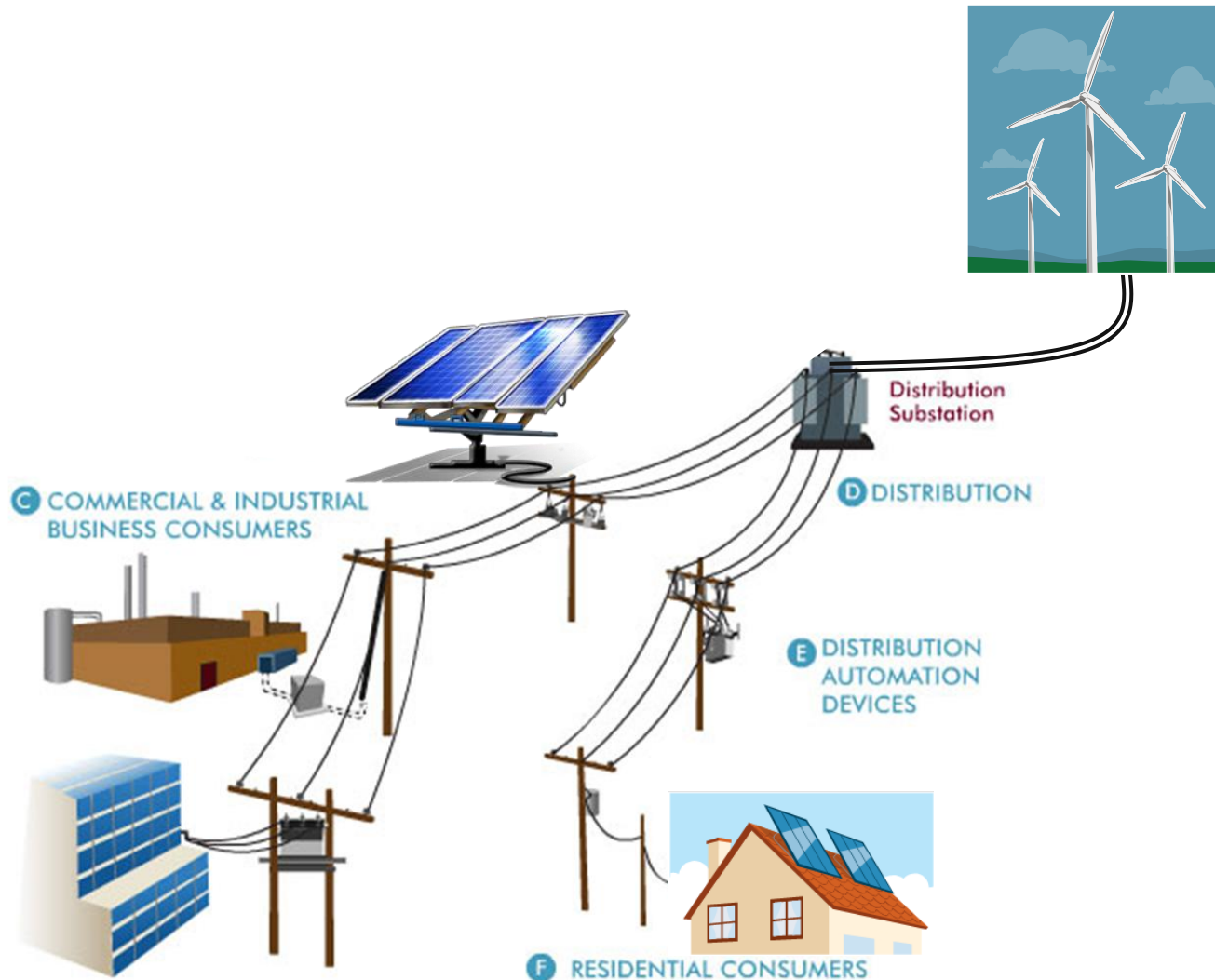


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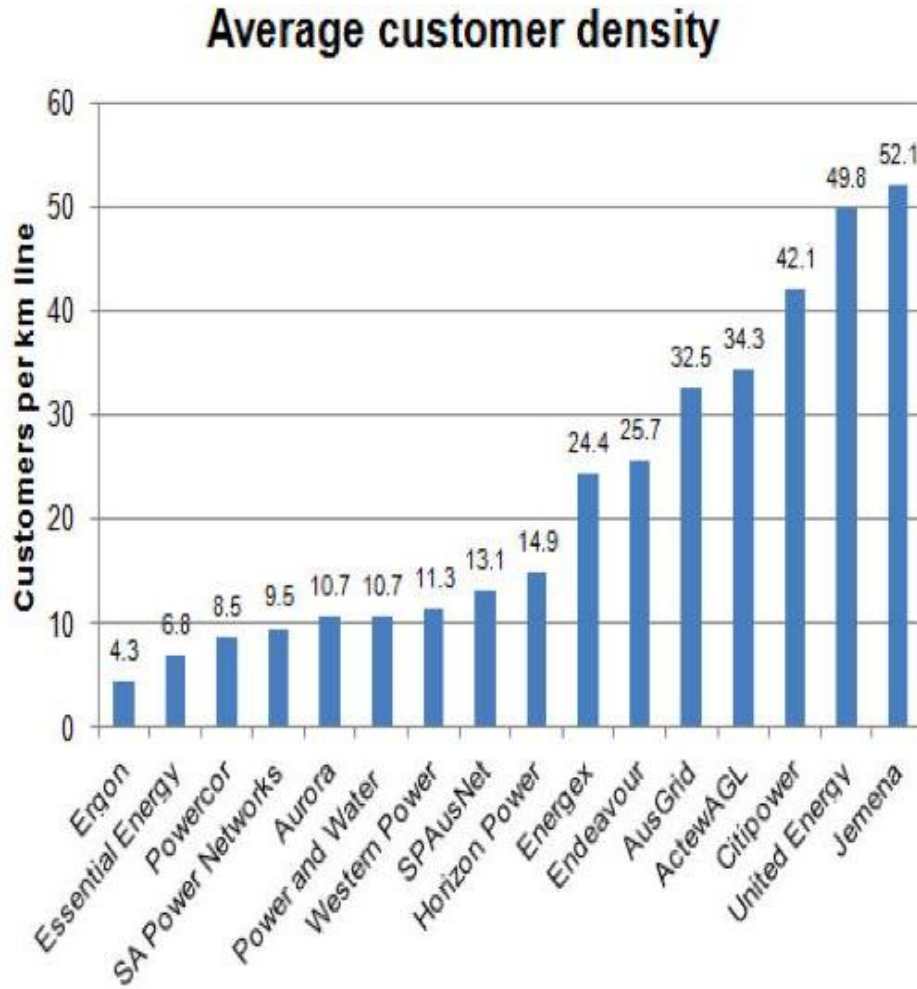
# What does it mean to let go?

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- The community becomes independent of the grid
  - There are many communities off-grid already
  - Different approaches – cross-subsidy vs cost recovery
- An alternative supply of energy is required
  - This is the difficult part
  - Takes time and capital, not an instant fix
  - Local benefits

# Where could communities let go?



- On the fringes of the grid
- Average density of customers is low
- Outside towns, density is even lower
- Bush fire risk areas

# How would it happen?

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1. Establish new business entity to generate, distribute and sell electricity
2. Acquire the local network and rationalise
3. New infrastructure required – energy supply
4. Transition from the current arrangements
5. Disconnect from the grid

# What is stopping communities?

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- Capital
- Regulation to cover the transition
- Business models
- Community drive

# Business models

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- IPPs already selling power off-grid
- Complete network purchase – back to the point of supply
- Embedded networks
- Distribution companies can be involved

# Regulation

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- Regulation exists for off-grid communities, embedded networks
- Doesn't cover a transition from on to off
  - Choice of retailer
  - Change of asset base
- Process of developing regulation needs to start



## **Actions and messages**

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- Precedents exist
- Opportunity is emerging
- Need to start a regulatory reform process



# Thanks for listening

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Any questions or comments?

## **IT Power** Renewable Energy Consulting

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Southern Cross House,  
6/9 McKay St, Turner, ACT  
PO Box 6127 O'Connor, ACT 2602  
info@itpau.com.au

**p** +61 (0) 2 6257 3511  
**f** +61 (0) 2 6257 3611  
**itpau.com.au**