

SUPPORTING EMISSION REDUCTIONS THROUGH A VIABLE WIND ENERGY INDUSTRY – LESSONS FOR AUSTRALIA

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Structure of the presentation

Danish wind industry – facts

Australian wind industry – facts

Wind industry by Australian state

Support policies in Denmark

Support policies in Australia

South Australia as a case study – policy and planning

What we can learn from Denmark

Conclusions

Wind industry Denmark – some facts

2009 European renewable energy directive for Denmark target 30% by 2020.

Denmark - target of 50% wind energy in electricity consumption by 2020 as part of its long-term strategy to achieve a 100% renewable energy mix in the electricity and heat sector by 2035, and in all sectors by 2050

Capacity – 1000 MW offshore; 3772 MW onshore

2011 – wind was 28.3% of Denmark's total electricity demand

Employment 23,500 (2007)

<http://energinet.dk/Flash/Forside/UK/index.html>

Wind industry Australia – some facts

Mandatory renewable energy target (MRET) = 1997

Renewable energy – 14.76% of Australia's power (2013). Wind 4%

2014 review of RET – recommend reducing RET

Australia is a federation. 3 levels of government – Cth; states; local government

6 states and 2 territories – each can have their own target.

Local government has no legislative power



WESTERN
AUSTRALIA

NORTHERN
TERRITORY

QUEENSLAND

SOUTH
AUSTRALIA

NEW
SOUTH WALES

VICTORIA

TASMANIA

Wind industry by Australian state

| State | Total installed wind capacity 2013 | Percentage of Australia's wind capacity | Penetration of wind in state electricity demand | Renewable energy target |
|-------|--|---|---|-------------------------|
| SA | 1205 MW 561 turbines 16 projects | 37.2% | 27% | 33% by 2020 |
| Vic | 939 MW 454 turbines 13 projects | 29% | 5% | Mothballed in 2009 |
| WA | 491 MW 308 turbines 21 projects | 15.2% | 8% | No target |



Wind industry Denmark – policy settings

Political context - political will

Late '70's – strong lobbying; anti-nuclear

Consensus and co-operative tradition – bottom up approach '80's, '90's

Ownership – small scale development

Tax and grid connection incentives

Feed-in-tariffs

Linking wind power to industry policy

Trust and industry certainty – strong targets



Wind industry Australia – policy settings

Political context – RET (2014 review)

Carbon tax and complementary measures – RET; ARENA

Strong lobbying for coal – despite this MRET introduced in 1997.

RET designed to support the lowest cost form of renewable energy that can be rolled out on a large scale

Review of the RET creates uncertainty for the industry and erodes investor confidence

No industry policy in Australia



Wind industry South Australia – planning and policy

**No Federal policy – reliance on RET
Climate Change and Greenhouse Gas
Emission Reduction Act 2007 (SA) set
targets:**

**20% by 2014 (reached in 2011);
33% by 2020**

**Wind farms approved by local councils –
Development Act 1993. Development
plans in support of renewable energy
(2003)**

**Quinn v Goyder [2010] SAERDC 63;
Paltridge v District council of Grant
[2011] SAERDC 23**

Wind industry South Australia – planning and policy

Impact of the cases: In SA, depends on the terms of the local development plan (case by case) – leads to uncertainty and subjectivity on visual amenity.

Statewide Wind farm Planning Policy – October 2012

- wind farms in all rural zones
- category 2 development – more than 2km from dwelling / township zone
- visual amenity – 1km from non-associated dwelling; 2km township zones
- vegetated buffers
- wind farms envisaged in sparsely populated zones eg farming and rural
not envisaged in valuable environmental, scenic and tourist areas.

Pastoral Land Management and Conservation (Renewable Energy) Amdt Bill 2014



Denmark – planning and policy

National policy goals, implemented locally

Regulated within the legislative planning system

**vertically integrated planning
between national, regional, local
designation of areas for wind
farms in local plans**

Promotion of Renewable Energy Act 2009

**financing preliminary
investigations – guarantee fund
compensation for loss of value to
residential properties**

**local citizen option to purchase
wind turbine shares**

**green scheme - support to local
scenic and recreational values**



Enabling conditions for wind industry

| Denmark | South Australia |
|--|--|
| Effective rule of law; and transparency in administrative and planning processes | Discretion in planning; Overridden by statute |
| A clear and effective pricing structure | Yes |
| Provisions for access to the grid (incentives & penalties for grid operators) | Yes |
| An industrial development strategy | No |
| A functioning finance sector | Not for community power |
| Expression of political commitment from government (e.g. targets) | Yes |
| A government and/or industry led strategy for public and community buy-in. | No |
| An employment development strategy | No |

Conclusions

SA has got the political will to support wind energy – what if it changes?

but some community is still unhappy

SA has legislated out community objections

What can we learn from the Danish experience? – developing resilience.

1) Better to have cooperation from all levels of government

2) industry policy

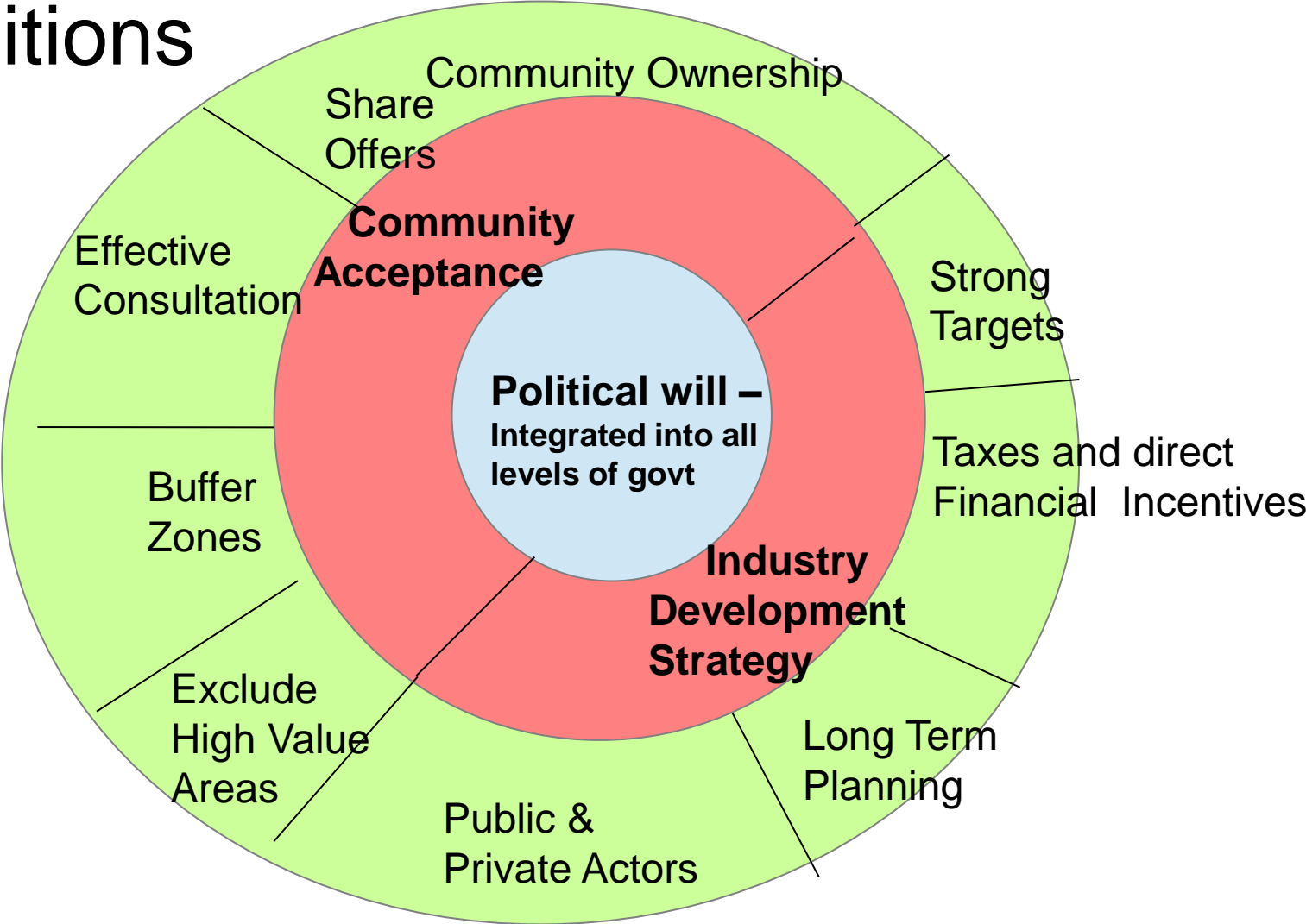
3) Community acceptance

Is carbon pricing essential? Yes and no. What to do with the revenue?

Wind projects received a refund from the Danish carbon tax and a partial refund on the energy tax. These refunds effectively doubled the payment to wind projects for the first five years of their operation

Under Australia's carbon tax, complementary measures included the RET and funding for renewable energy projects under ARENA (now abolished)

Optimum Wind Energy Enabling Conditions





Thank you



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