

# Nordic Marina

## White Paper Preliminary Conclusions

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# Nordic Marina

- NordBio: the flagship of Iceland's 2014 Nordic Council chairmanship programme
  - Nordic Marina is part of NordBio
- Goal of Nordic Marina
  - Evaluate potential to reduce CO<sub>2</sub> emissions from the Nordic marine industry
  - Bring together stakeholders
  - Start and support other projects with same goal

# Nordic Marina Activities

- Network of stakeholders established across the Nordic countries
- Workshops held across the Nordic countries
- Seminars
- Project proposals
- White paper to be published later this year

# Barriers to Sustainability

- Workshops identified barriers regarding
  - Government initiative and contribution
  - Financing and investment opportunities
  - State of technology
  - Infrastructure
  - RD&D
  - Reporting and information sharing

# Government Initiative and Contribution

- Key messages:
  - Commitment and concrete, long term engagement of government is required
  - Innovative procurement taking into account a broader set of factors than currently
  - A phase out of fossil fuel subsidies would create a more equal playing field for alternative fuels

# Government Initiative and Contribution – Possible Policy Actions

- Long term policy which creates an enabling environment for the transition from fossil fuels to alternatives
- Direct involvement in supporting infrastructure build-up
- Green public procurement practices
- Policy instruments which promote innovation and competitiveness of green fuels
- Regulating harbor emissions

# Financing and Investment

- Key messages:
  - There is a need for increased funding opportunities and economic incentives to tackle high capital expenditure
  - Market take-up requires policy action



# Financing and Investment – Possible Policy Actions

- Tax incentives for early adopters of alternative fuels and emission reduction technologies
- Increased funding to commercialise research
- Promote green investment
- Develop policy framework for market development of alternative fuels and infrastructure

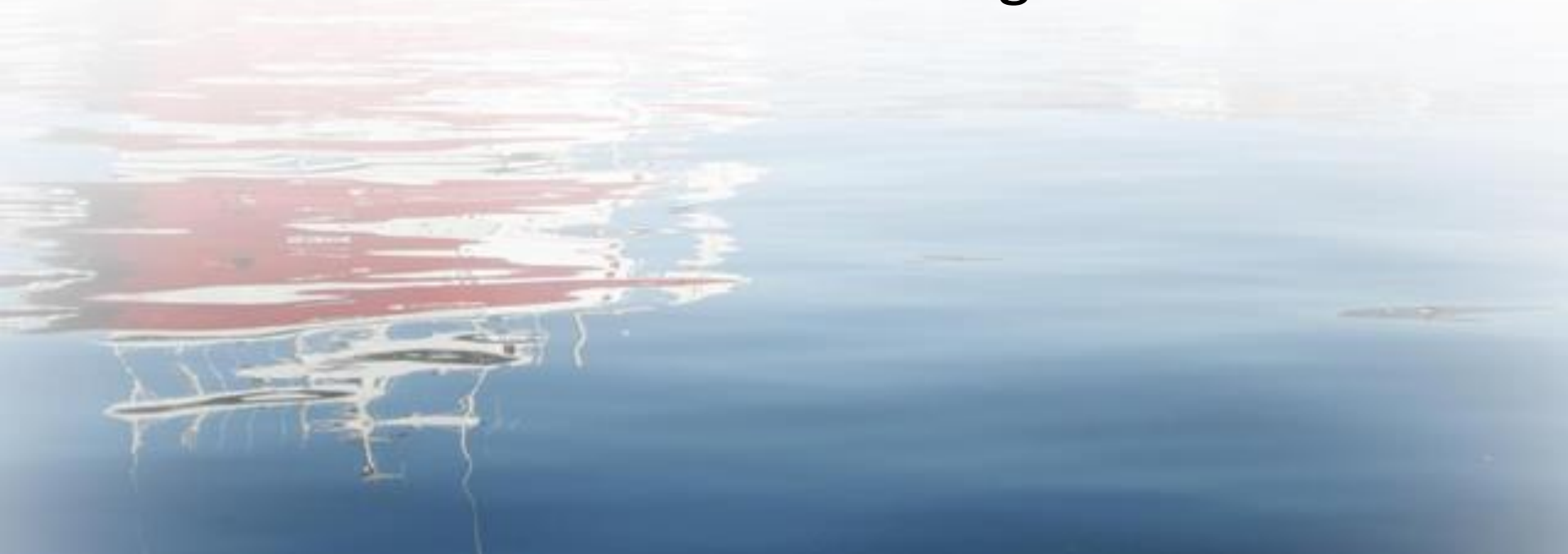


# State of Technology

- Key messages:
  - There is a clear need for infrastructure to support different fuels in harbors and existing vessels to promote the availability of alternative fuels
  - Different energy carriers call for the availability of different storage and treatment solutions
  - Encouragement to adopt new technologies for the current ship fleet

# State of Technology – Possible Policy Actions

- Develop sound business cases for the investment in infrastructure
- Support the accelerated standardisation of alternative fuels and technologies



# RD&D, education, reporting

- Key messages:
  - Improve information flow on low emission projects to the public, influencers, decision makers and potential investors
  - Further stimulate networks and information exchange on a smaller, local scale to reduce fragmentation
  - Make access to information on current and new technology easier for crews

# RD&D, education, reporting – Possible Policy Actions

- Promote existing or establish local, national and regional platforms for stakeholders
- Fund academic networks to strengthen collaboration and information sharing



# Current Policies in the Nordic Countries

- Regarding specific policies to promote renewable fuels or CO<sub>2</sub> emission reduction from the sector
- Matrix setup:

| Name of sector | Name of policy action  |  |
|----------------|--|--|
| Country name   | Status code:<br>-- not implemented<br>+/- indirect effects<br>+ somewhat implemented<br>++ implemented |  |
|                | --   |  |
|                | -/+  |  |
|                | ++   |  |

# Current Policies in the Nordic Countries

| Marine sector | CO <sub>2</sub> tax incentive | VAT incentive | Provision of infrastructure | Procurement |
|---------------|-------------------------------|---------------|-----------------------------|-------------|
| Denmark       | --                            | --            | --                          | --          |
| Finland       | --                            | --            | --                          | --          |
| Iceland       | --                            | --            | --                          | --          |
| Norway        | --                            | --            | +/-                         | +           |
| Sweden        | --                            | --            | --                          | --          |

# Current Policies in the Nordic Countries

- For comparison, here is the same matrix for land transport:

| Land transport | CO <sub>2</sub> tax incentive | VAT incentive | Provision of infrastructure | Procurement |
|----------------|-------------------------------|---------------|-----------------------------|-------------|
| Denmark        | +                             | --            | +                           | +           |
| Finland        | --                            | --            | +/-                         | --          |
| Iceland        | ++                            | ++            | +/-                         | --          |
| Norway         | ++                            | ++            | ++                          | +           |
| Sweden         | --                            | --            | +/-                         | +/-         |

# Current Policies in the Nordic Countries, cont.

| Marine sector | Govern-<br>ment<br>policy | RD/D<br>funding | Adoption<br>of inter-<br>national<br>standards | CO <sub>2</sub><br>specific<br>targets |
|---------------|---------------------------|-----------------|--|--|
| Denmark       | --                        | +/-             | ++   | --                                     |
| Finland       | --                        | +               | ++   | +/-                                    |
| Iceland       | --                        | --              | --   | --                                     |
| Norway        | +                         | ++              | ++   | +                                      |
| Sweden        | --                        | +               | ++   | +/-                                    |



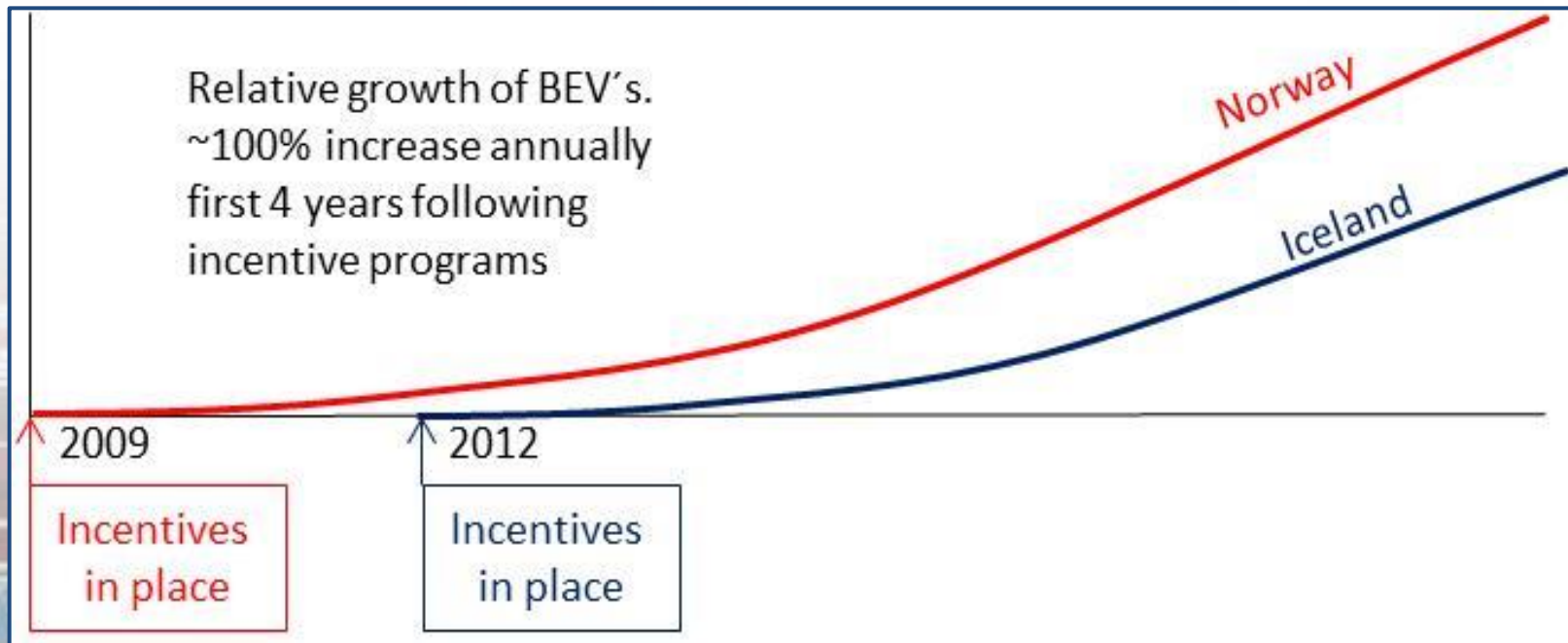
# Current Policies in the Nordic Countries, cont.

- For comparison, here is the same matrix for land transport:

| Land transport | Government policy | RD/D funding | Adoption of international standards | CO <sub>2</sub> specific targets |
|----------------|-------------------|--------------|-------------------------------------|----------------------------------|
| Denmark        | ++                | +            | ++                                  | ++                               |
| Finland        | +/-               | +            | ++                                  | ++                               |
| Iceland        | ++                | -            | ++                                  | +                                |
| Norway         | ++                | ++           | ++                                  | ++                               |
| Sweden         | +                 | +            | ++                                  | ++                               |

# Effect of Incentives, an Example

- Again, land transport for comparison. Battery EV's in Iceland and Norway:



# Where We Go From Here

- Present white paper to Nordic Council
  - Hopefully will result in policy actions
- Current network of stakeholders may continue in a different form

**[www.nordicmarina.com](http://www.nordicmarina.com)**

Questions?

