



**Roinn Cumarsáide, Gníomhaithe  
ar son na hAeráide & Comhshaoil**

Department of Communications,  
Climate Action & Environment

# **Renewable Heat Incentive**

**Bio-economy: Creating Value**

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# Why Renewable Heat Incentive?

- Legally binding 2020 RES target – 16% total energy;
- Potential gap to target in RES-H (1%-5%) in 2020;
- Analysis identified that an exchequer-funded RHI scheme for (industrial and commercial non-ETS) users of RES-H most cost-effective option;
- 2015 consultation highlighted relevant technologies and high-level design aspects;
- DCCAE are now finalising detailed design aspects of RHI scheme;
- Final public consultation December 2016.



# RHI Assessment Criteria

- Incentivising an efficient level of investment to meet the target;
- Incentivising efficiency at the system specification, installation and operation stages;
- Minimising costs to the exchequer (Value for Money); Northern Ireland RHI (Important lessons)
- Allocating risks efficiently;
- Impact on particle emissions from biomass;
- Impact on the diversity of the renewable heating technology mix;
- Complexity/clarity;
- Impact on the market/sustainability (long-term);



# Review of Assessment Criteria

- **Incentivising an efficient level of investment to meet the target**
  - a) 2,300 GWh of RES-h will be needed between now and 2020 (end of year);
- **Minimising costs to the exchequer (Value for Money)**
  - a) RHI must take into account the scheme's ability to minimise the overall cost to Exchequer; multi-annual budgets must be secured. Most efficiency and effective design must be presented (non-ETS focus).
- **Allocating risks efficiently**
  - a) The scheme should distribute risks associated with transition towards RHI efficiently between investor and government. One particular risk is the price risk of adopting RHTs as compared to fossil fuel equivalents; this issues was also reflected in 2015 consultation. The scheme should therefore insulate investors sufficiently from fuel price volatility to encourage uptake (while also not exposing tax payer to too much risk);
- **Impact on particle emissions from biomass/CO2**
  - a) The scheme should aim to minimize the impact on particle emission from biomass;
  - b) 2015 consultation response also expressed concerns about the impact of biomass on air quality, demanding measures to contain the levels of particle emissions;
  - c) A tool such as **ToSIA(Tool for Sustainability Impact Assessment)** could be used to assess the carbon intensity of biomass from different locations.
- **Incentivising efficiency at the system specification, installation and operation stages**
  - a) System specification (appropriately sized installation). UK RHI experience (biomass participants reported that there was a "sweet spot" just below 200 kW to optimise RHI returns); Installation: incentivising the system installation to perform to standard; Operation: incentivising the efficient use of system (energy efficiency):



# Review of Assessment Criteria

- **Impact on the diversity of the renewable heating technology mix**
  - a) Diversification may be desirable if: it is required to meet target in most cost effective way; enhances long term sustainability and viability of scheme;
  - b) Too much diversification can be negative due to an increase in the admin burden and complexity of scheme and possibility of diminishing the scheme's ability to meet other assessment criteria (e.g. overall cost if more expensive RHTs supported.)
- **Complexity/clarity**
  - a) A highly complex tariff scheme will impact negatively on uptake and increase cost of implementation;
  - b) Complexity can be reduced via guide to application process (note: Ofgem guides)
- **Impact on the market/sustainability** (longer-term considerations, beyond 2020)
  - a) The scheme needs to contribute to the development of sustainable markets. This could be achieved through the implementation of sustainability criteria for biomass to ensure that the RHI is not subsidising unsustainable biomass that delivers little or no carbon savings, as this may lead to even higher emissions relative to heat from fossil fuels. (note: EU Sus Criteria; WFQA; UK standards)
  - b) What does criteria do to emissions, domestic market, imports, and overall cost?



# Design aspects of RHI

- **Differentiation by renewable technology**
  - a) The possible variations of differentiating tariffs by renewable technology are the following.
    - a) A single tariff across all technologies covered by the scheme.
    - b) Different tariff for certain groups of technologies covered by the scheme.
    - c) A separate tariff for each technology covered by the scheme.
- **Differentiation by installation size**
  - a) The possible variations of differentiating tariffs by installation size are as follows.
    - a) No tariff banding by installation size.
    - b) Tariff banding by installation size, no tiering (note recent UK decision not cost-effective)
    - c) Tariff banding by installation size, with tiering based on percentage output.
    - d) No tariff banding, tiering based on absolute kWh output.
  - b) There has been strong feedback from stakeholder consultation that banding leads to gaming. This is consistent with evidence from elsewhere, in particular the UK.
- **Minimum participant eligibility**
  - a) Consideration may also be given to a participant's energy efficiency requirements in order to qualify for the scheme; should this be new accreditation or an existing scheme. (note: EXEED (Excellence in Energy Efficiency Design) and non domestic Building Energy Rating).
- **Profile of payments to scheme participants**
  - a) Advantages/Disadvantage of on-going payment, with fixed and variable elements, on-going payment with variable element only; and upfront payments and on-going payment (variable only)



# Design aspects of RHI

- **Payment based on metered or deemed heat use**
  - a) Variable RHI payments could be based on either metered heat use, or deemed heat use. Based on this we consider the following possible design options: ( Metered kWh of heat consumed without tariff tiering; Metered kWh of heat consumed with tariff tiering; Deemed heat consumption).
  - b) Stakeholder feedback from the industry consultation raised concerns about the cost of metering, and in particular, the disincentive this may pose for smaller applicants. Similar concerns in UK RHI. We therefore also consider a fourth option: Metered for larger users and deemed for smaller users.
- **Duration of support**
  - a) The two main considerations in relation to the appropriate duration of support are:
    1. the investment decision timeframes used by different types of businesses; and
    2. the useful lifetime of RHTs, maintenance structure and availability of replacement parts.
  - b) Based on this, we consider four possible variations in the length of support required: 20 years (same as UK); 15 years; 10 years; and 5-7 years.
- **Systematic adjustments to tariffs**
  - a) At a high level there are two possible options:
    1. systematic adjustments of tariffs to reflect evolution of key input costs over time, such as (tariffs indexed to inflation; or tariffs indexed to industry specific costs e.g. fuel costs); and
    2. budget management mechanisms: (degression only; degression and overall budget cap; or budget cap only).



# Design aspects of RHI

- **Impact on biomass emissions**
  - a) Biomass combustion generates a range of air pollutants including fine particulate matter (PM<sub>2.5</sub>), persistent organic pollutants (POPs) and nitrogen oxides (NO<sub>x</sub>). The amount of pollutants produced depends on:
    1. the quality of fuel input,
    2. conversion technology used, and
    3. how the technology has been installed, maintained and managed.





# RHI Timeline

- Final Public Consultation (December 2016);
- Government decision required;
- State-Aid process on-going;
- Grandfathering decision ( final decision in State Aid clearance only as in UK scheme);
- Administrator to be in place early new year:
- Q3/4 2017 go-live



# Thank you

