The Current Situation/ Future Opportunities for Solid Recovered Fuel (SRF) in Ireland

CIWM Workshop

Hilton Dublin City Hotel, 20 October 2011

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Content of Presentation

- Current Situation on SRF
- National Waste Policy
- End-of-Waste Status for SRF?
- By-product?

Current Situation on SRF

Definition of Solid Recovered Fuel (SRF)

Solid Recovered Fuel (para 3.12 EN 15359) Solid Fuel Prepared from Non-hazardous Waste to be Utilised for Energy Recovery in Incineration or Co-incineration Plants and Meeting the Classification and Specification Requirements Laid Down in EN 15359

Use of Non-hazardous Waste as an Industrial Fuel

Year/ Material	2009	2008	2007	2006
Wood	72,586	59,382	71,774	83,793
SRF	47,818	26,234	32,695	28,678
Edible Oils/Fats	4,018	2,166	2,786	4,686
Other	26,405	792	-	7,153
TOTAL	150,826	88,574	107,205	124,872

Source: EPA National Waste Report Series

Location of Use of SRF derived from Non-hazardous Waste

Location	2009	2008	2007	2006
Home	36,642	63	0	0
Abroad	11,176	26,161	32,695	27,883
TOTAL	47,818	26,224	32,695	27,883

Source: EPA National Waste Report Series

Solid Recovered Fuel Yields from Residual Waste Treatment Processes

Type/ Fraction	Aus/ Ger MBT Average	STRIVE MBT Study Average	Manchester High Performance Process
SRF	45%	41%	60%
Stabilised	26%	28%	10%
"Losses"	26%	29%	
Recycling	3%	2%	30%

National Waste Policy

Policy Background

"Changing our Ways" (1998)

- Waste Hierarchy,
- Modernise Waste Management Practice - Environmentally Efficient and Cost-Effective Infrastructure,
- "Polluter Pays Principle" i.e. Full Payment by Waste Producers for Treatment and Disposal
- Waste to Energy: Scope for Use of Waste as a Substitute Fuel in Industry and Power Sectors,
- Waste Management Plans to Provide the Strategic Framework for Implementation of Improved Waste Management Performance.

"Delivering Change" (2002)

- Prevention, Re-use and Recycling of Waste,
- Potential of Waste as a Fuel for Energy Production.

Policy Background

"Taking Stock and Moving Forward" (2004)

- Re-affirms Waste Hierarchy as the Cornerstone of an Integrated Approach to Waste Management,
- General Advice on/ Structural Support for Waste Management,
- Implementation of WMPs!!!!

"National Strategy on Biodegradable Waste" (2006)

- Waste Hierarchy Approach
- Residual Waste Pre-treatment to Meet Landfill Diversion Targets,
- Potential Pre-treatment Options of Thermal Treatment with Energy Recovery or Mechanical Biological Treatment (MBT)

"National Climate Change Strategy: 2007-2012"

- Waste Hierarchy,
- MBT Expected to Contribute to National Energy Recovery Policy

"EPA Technical Guidance on MSW Pre-treatment"

- Maximum % of BMW within MSW stipulated in Landfill Licences

Programme for Government 2011

Sustainable Waste Policy

Develop a National Waste Policy that Will Adhere to the EU Waste Hierarchy and Favours a Coherent Approach to Waste Management that Minimises Waste going to Landfill, and that Maximises the Resources that can be Recovered from it.

NEW Waste Framework Directive (WsFD) 2008/98/EC

- OJEU 22/11/2008, entry into force 12/12/2008
- Transposed March 2011 (S.I. No. 126 of 2011)
- Definition of “Recycling” (Article 3.17)
- Waste Hierarchy - a Legal Obligation (Article 4)
- Separate Collection of Waste (Article 10.2)
- “End-of-Waste Status” (Article 6)
- “By-products” (Article 5)

Article 3.17 of WsFD 2008/98/EC Definition of “Recycling”

‘Recycling’ means any recovery operation by which Waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations

Article 4 of WsFD 2008/98/EC "Waste Hierarchy" (1)

- Waste Hierarchy shall Apply as a Priority Order in Waste Management Legislation and Policy:
  - (a) Prevention;
  - (b) Preparing for re-use;
  - (c) Recycling;
  - (d) other Recovery, e.g. Energy Recovery; and
  - (e) Disposal.

Article 4 of WsFD 2008/98/EC "Waste Hierarchy" (2)

- When Applying the Waste Hierarchy, Member States shall take into account .... Technical Feasibility & Economic Viability, Sustainability, Protection of Resources and Overall Environmental, Human Health, Economic & Social Impacts
- These Factors will Vary on a Case-Specific Basis for Each Situation.
- Waste Management Plans shall be Established in accordance with the Waste Hierarchy (Article 28 of WsFD)

Article 4 of WsFD 2008/98/EC "Waste Hierarchy" (3)

- Member States shall take Measures to Encourage Options that Deliver the Best Overall Environmental Outcome (BOEO). May Require SPECIFIC WASTE STREAMS Departing from Hierarchy as Justified by LIFE-CYCLE THINKING on Overall Impacts of the Generation/ Management of such Waste.
- UK Guidance Identifies 3 Waste Streams where Departures Warranted.
- UK Guidance Highlights that BOEO may Differ between Member States

Article 10.2 of WsFD 2008/98/EC "Separate Collection"

"Where necessary …… to Facilitate or Improve Recovery, Waste shall be Collected Separately if ***Technically, Environmentally*** *and* ***Economically Practicable*** *….."*

Guidance on Implementation of WsFD 2008/98/EC

- Commission Guidance by End 2011,
- DECLG also Preparing Guidance Document,
- National Waste Management Coordinating Group for the Process of the Evaluation and Review of Waste Management Plans.

“Towards a New National Waste Policy: A Discussion Document”

- Resource Efficiency Focus
- Public Consultation Process Completed 30 September 2011,
- 80+ Submissions being Evaluated,
- Waste Policy Review to be Completed 2011,
- Probable Legislation to Underpin Policy Changes,
- Forward to Implementation!!!!!!

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“End-of-Waste” (EoW) Status

Logic Behind EoW Status Created Under Article 6 of WsFD 2008/98/EC

Waste Status Remains if Regulatory Controls under Waste Legislation are needed to Protect the Environment and Human Health; otherwise the Material should have End-of-Waste Status to Facilitate Recycling and Recovery.

Fulfilment of End of Waste (Article 6.1 of WsFD 2008/98/EC)

- Applies to “Waste” not “by-product”
- Must have undergone a Recovery Operation
- Four Specific Criteria have to be fulfilled
  1) Market or Demand Exists,
  2) Technical Requirements, Legislation and Standards,
  3) Commonly Used for Specific Purpose,
  4) No Adverse Environmental or Health Impacts.

WsFD - Article 6

- Harmonised EU-wide EoW Criteria shall be Adopted for Specific Wastes via the Technical Adaptation Committee (TAC) [6.2]
- Where Harmonised EU-wide Criteria have not been set, MS may decide EOW on a Case by Case Basis, Taking Account of Case Law [6.4]

Outline of EoW Criteria

Case Study Findings by the Joint Research Council of the European Commission have Established the following Categories of Criteria for EoW:

1. Product Quality Requirements
2. Requirements on Input Materials
3. Requirements on Treatment Processes and Techniques
4. Quality Assurance Procedures
5. Information Provision - Statement of Conformity

Status on EU EoW Regulations

- **Metal Scrap of Aluminium and Iron** - Regulation (EU) No. 333/2011 Adopted and Published in OJEU on 8 April 2011 – Applicable across EU from 9 October 2011
- **Waste ('recovered') Paper Fibre for Paper Manufacturing, Glass Cullet for Remelting and Copper Scrap** – Technical Studies Completed and respective EU Regulations scheduled for Adoption in early 2012
- **Biowaste and Plastics** – Background Studies Completed and Technical Studies Due for Completion in 2012.

- Commission Study on **Suitability of Waste-derived Fuels for EoW** – Began July 2010 and No further Developments at EC Level until Results at End 2011.

EoW for SRF – Pointers from Scrap Metal Regulation 333/2011 (1)

PRODUCT QUALITY

- **Compliance with** Metal Scrap **Specification** (Institutional or Industry) or Customer Specification for Direct Use in Production of Metal
- **Steriles** < 2% (Iron/ Steel), < 5% (Aluminium) "**Limited Foreign Matter**"
- (**Free of Visible Oil and Radioactivity) - "Deleterious Constituents"**
- **No Display of Hazardous Properties** (WFD Annex III)

INPUT MATERIAL

- **Segregation at Source** or **Treated to Separate the Particular Metal** (from other Metals and Materials),
- **Waste with Hazardous Properties Requires Prior De-pollution** (End-of-Life Vehicles, WEEE)
- **Certain Sources of Metal Wastes** Containing Oily Fluids or Paints **are Prohibited as Input** e.g. filings and turnings, barrels and containers.

EoW for SRF – Pointers from Scrap Metal Regulation 333/2011 (2)

Treatment Processes and Techniques

- **All Mechanical <u>Processes needed to Prepare</u> the Scrap Metal <u>for Direct Input into Final Use shall have been Completed</u>** (e.g. cutting, shearing, shredding or granulating, sorting, separating, cleaning, de-pollution)
- **Specific Requirements shall apply to Certain Components**

Quality Management System (QMS)

- **Externally-Verified QMS must be Implemented by Producer**
- **QMS Sets Exact Monitoring Requirements for each EoW Criterion**
- **QMS includes Full Set of Documented Procedures for 333/2011 e.g.**
  - **Acceptance Control of Waste Inputs**
  - **Monitoring of Treatment Processes and Techniques**
  - **Monitoring of Quality of Scrap Metal**

EoW for SRF – Pointers from Scrap Metal Regulation 333/2011 (4)

STATEMENT OF CONFORMITY (SoC)

- **SoC must be Issued by the Producer or Importer to next Holder for Each Consignment of Scrap Metal EoW**
- **SoC shall Certify e.g.**
  - **Scrap Metal Type and Specification –** including Details when a Customer Specification is used
  - **Confirmation of Compliance with the Relevant Specification**
  - **Confirmation that Compliant QMS Implemented by Producer – including Independent Verification**
  - **Confirmation of Compliance with EoW Criteria**

Onus on Facility Operators (where the Waste Recovery Operation takes place i.e. "producers" who Transfer Scrap Metal declassified to non-waste to another holder for the first time) **to Implement the Necessary Procedures to Comply with the Criteria and Obligations** in Regulation 333/2011

Failure of SRF to Attain EoW?

- **Recent Commission Guidance Document on the Application of R.1 Energy Efficiency Formula for MSW Incinerators Highlights that Secondary Fuels Derived from Waste Must be Regarded as Waste unless EoW Status Attained.**
- **Secondary Fuel Considered as Waste is Subject to Waste Incineration Directive**

Article 5 of WsFD
“By-product”

By-products (Article 5 of WsFD)

To be Classified as a By-product (and not Waste)

- Four Specific Criteria have to be fulfilled by a Substance or Object from a Production Process:
  1. further Use is Certain.
  2. can be Used Directly without any further Processing other than Normal Industrial Practice.
  3. Produced as Integral Part of a Production Process.
  4. further Use is Lawful i.e. Meets Technical Requirements, Legislation and Standards with no Overall Adverse Environmental or Human Health Impacts.

By-products (Reg. 27 of WsFD Transposition Regulations 126 of 2011)

Substance or Object from a Production Process-

- When Viewed as a By-product, Economic Operator Concerned shall Notify EPA, including Relevant Evidence;
- EPA may make a Binding Determination as a Waste and not a By-product; and
- Presumption of Waste where EPA not Notified.

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