



IRENA Workshop on Renewable Energy Standards

Summary of the Report on International standardisation in the field of Renewable Energy

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Gideon Richards – HATS WORN

- Standards & Certification
 - SAG-E (ISO Strategic Advisory Group on EE & RE) – Member for UK / BSI
 - UK Committee Chairs - PTI/17 - Solid Biofuels & Solid Recovered Fuels Standards & PTI/20 - Sustainability Criteria for Bioenergy Standards
 - ISO/TC238 Working Group 3 (Fuel Quality Assurance) - Chair
 - CEN/TC335 Working Group Two (Specification & Classes, Fuel Quality Assurance)
 - International Renewable Energy Certification Organisation (IRECO) - Director
 - MCS Product and Installer Certification - Steering Group Chair & Interim CEO
- Policy, Regulation, Strategic Direction and Commercial
 - Microgeneration Government Industry Contact Group
 - UK Dept. Energy & Climate Change Committee for Cost Reduction of PV Installations
 - CWP Ltd – Energy, Energy from Waste & Environmental Consultants – CEO
 - DC21 Group Ltd – Renewable Energy Generating Company - Director



Complexities of Standardisation

- International → Regional → National → Organisational
 - Perception of Simple Hierarchical Standards
 - Organisations in the Standards making community
 - Difficult to understand publishing requirements
 - Difficult to understand the processes
 - Lack of consistency in some respects and similar in others
- How are the standards being developed selected?
 - Global Relevance?
 - Industry requests?
 - Societal Needs?

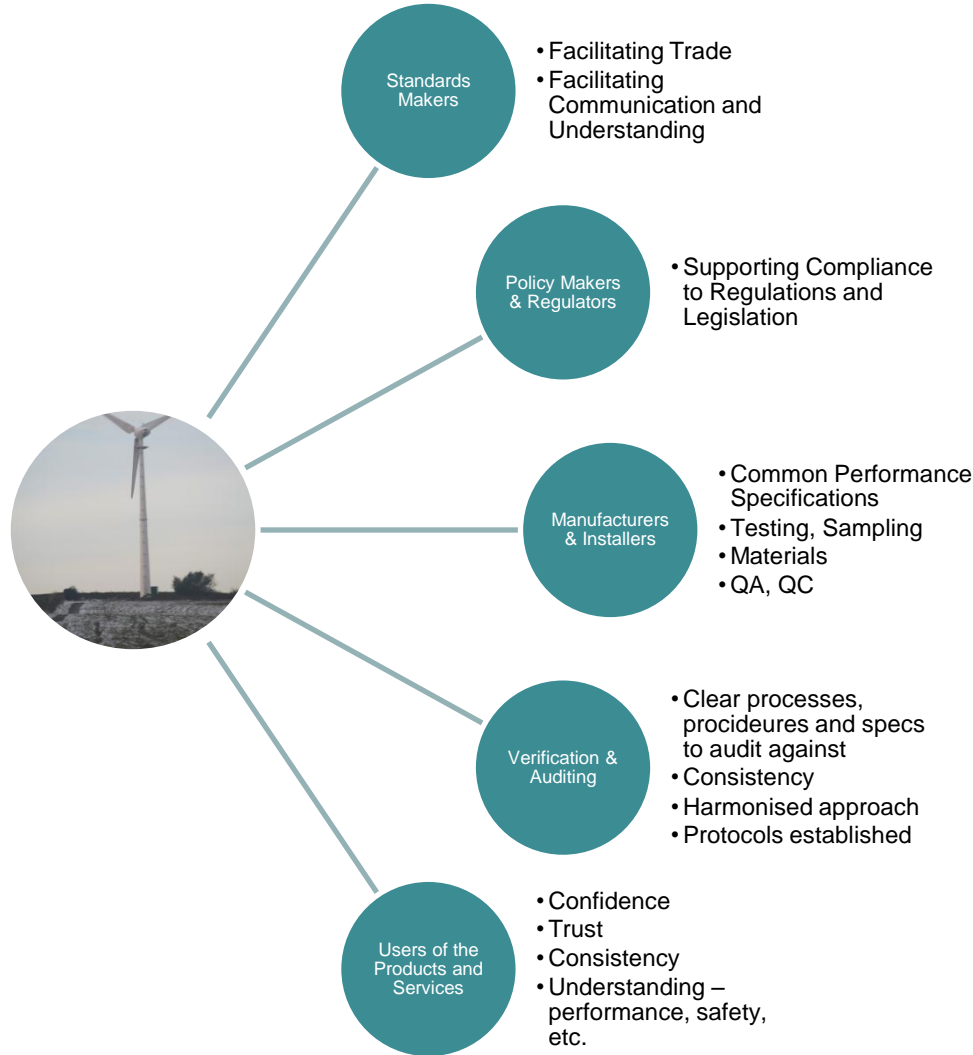


Standards based on consensus

- Consensus should start at where the standards committee(s) should reside – e.g. Global Relevance
- Standards committees need to have an appropriate balance and mix of active members
 - Technically
 - Demographically
 - Geographically
- Without the above consensus can lead to sub-optimisation outcomes – particularly important if legislation and regulation finds it difficult to use the standards!



Stakeholders requirements from standards



- Different stakeholders have different needs
- Legislation and Regulation being more supported by certification, verification and auditing based on standards
- Diversity of needs leads to potential mismatch of requirements



What Standards Do I Need?

IEC Webstore
International Electrotechnical Commission

Welcome > Search > Register > Check out > Payment > Order confirmation

Publication detail

Reference: ISO/IEC 17020 ed2.0

Title: Conformity assessment – Requirements for the operation of various types of bodies performing inspection

Publication date: 2012-02-27

Format, price (Swiss francs) and language: 92.- EN-FR EN FR RU SP 18 pages 363 Kb

Abstract: ISO/IEC 17020:2012 specifies requirements for the competence of bodies performing inspection and for the impartiality and consistency of their inspection activities.

Finding out what to purchase or even need is not simple – different sites with differing degrees of information

Lots of sites - limited drill down and difficult to get to the actual requirements

ISO Organization for Standardization

International Standards for Business, Government and Society

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Products > ISO Standards > By TC > CASCO Committee on conformity assessment

ISO/IEC 17020:2012

Conformity assessment – Requirements for the operation of various types of bodies performing inspection

| Language | Format | Add to basket |
|----------|--------------|---------------|
| English | PDF (354 kB) | CHF 92,00 |
| English | Paper | CHF 92,00 |
| French | PDF (363 kB) | CHF 92,00 |
| French | Paper | CHF 92,00 |

General information

Number of Pages: 18

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Status: Published Stage: 80.80 (2012-02-27)

TC/ISG: CASCO

Abstract: ISO/IEC 17020:2012 specifies requirements for the competence of bodies performing inspection and for the impartiality and consistency of their inspection activities.



Cost of Standardisation (1)

| Example of Potential Cost of Using Standards – Recommendations for small renewable energy and hybrid systems for rural electrification – Part 9-1: Micropower systems IEC/TS 62257-9-1 & Indispensable Normative Standards | | |
|--|--|--------------------------------------|
| Standards No. | Standard Name | Cost of Standards (USD) ¹ |
| IEC/TS 62257-9-1 | Recommendations for small renewable energy and hybrid systems for rural electrification – Part 9-1: Micropower systems | 252.31 |
| IEC 60364 (all parts) | <i>Low-voltage electrical installations</i> <i>Note: All parts would equate to 41 standards documents</i> | 4980.40 |
| IEC 60364-5-53:2001 | <i>Electrical installations of buildings – Part 5-53: Selection and erection of electrical equipment – Isolation, switching and control</i> | 293.71 |
| IEC 60529 (all parts) | <i>Degrees of protection provided by enclosures (IP Code)</i> <i>Note: All parts would equate to 13 standards documents</i> | 2350.69 |
| IEC/TS 62257-2:2004 | <i>Recommendations for small renewable energy and hybrid systems for rural electrification – Part 2: From requirements to a range of electrification systems</i> | 283.22 |
| IEC/TS 62257-4:2005 | <i>Recommendations for small renewable energy and hybrid systems for rural electrification – Part 4: System selection and design</i> | 188.81 |
| IEC/TS 62257-5:2005 | <i>Recommendations for small renewable energy and hybrid systems for rural electrification – Part 5: Protection against electrical hazards</i> | 188.81 |
| IEC/TS 62257-6:2005 | <i>Recommendations for small renewable energy and hybrid systems for rural electrification – Part 6: Acceptance, operation, maintenance and replacement</i> | 94.41 |
| IEC/TS 62257-7-1:2006 | <i>Recommendations for small renewable energy and hybrid systems for rural electrification – Part 7-1: Generators – Photovoltaic arrays</i> | 293.71 |
| IEC/TS 62257-7-3:2008 | <i>Recommendations for small renewable energy and hybrid systems for rural electrification – Part 7-3: Generator set – Selection of generator sets for rural electrification systems</i> | 209.79 |
| IEC/TS 62257-9-2:2006 | <i>Recommendations for small renewable energy and hybrid systems for rural electrification – Part 9-2: Microgrids</i> | 251.75 |
| IEC/TS 62257-9-4:2006 | <i>Recommendations for small renewable energy and hybrid systems for rural electrification – Part 9-4: Integrated system – User installation</i> | 125.87 |
| Total Cost of Suite of Standards to comply with the indispensable requirements | | 9,513.48² |

- Standards are a significant cost - affordability
- Appropriate use of standards may be limited
 - only having the top standard or
 - avoiding standards, if needed once for project
- Who buys them?
- Restricts their use
- Copyright infringement is probably large

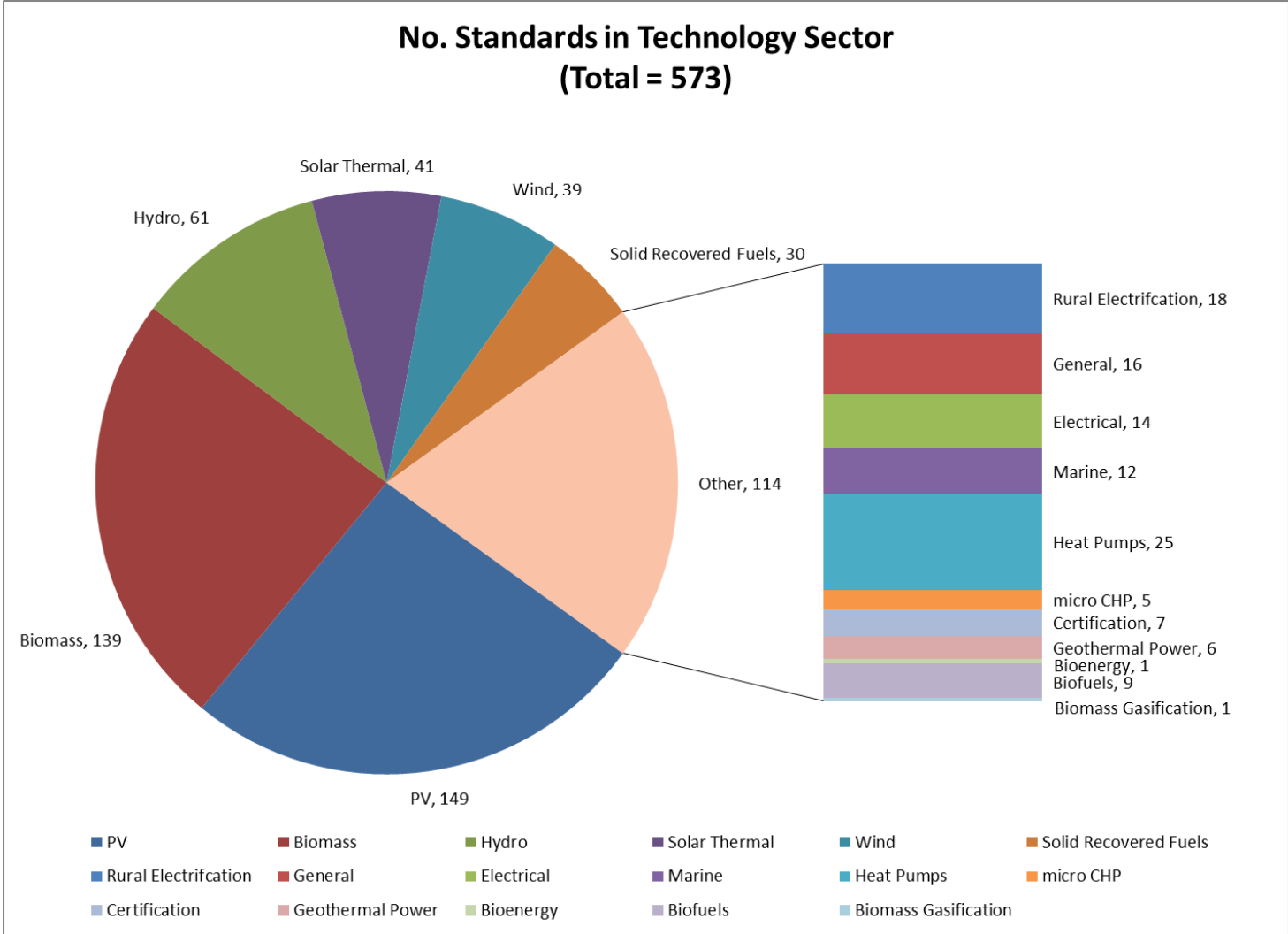


Inventory

- Difficult to interpret the data
- Standards categorised, however, down to interpretation
 - What primary role of standard is for
 - How it will be used
 - Where it is used
- Important to understand which standards are produced by what organisations and how much crossover there is between the requirements (or not) and why.
- ***If we have difficulties as the experts in the field of standardisation, think how hard it is for the other stakeholders!***

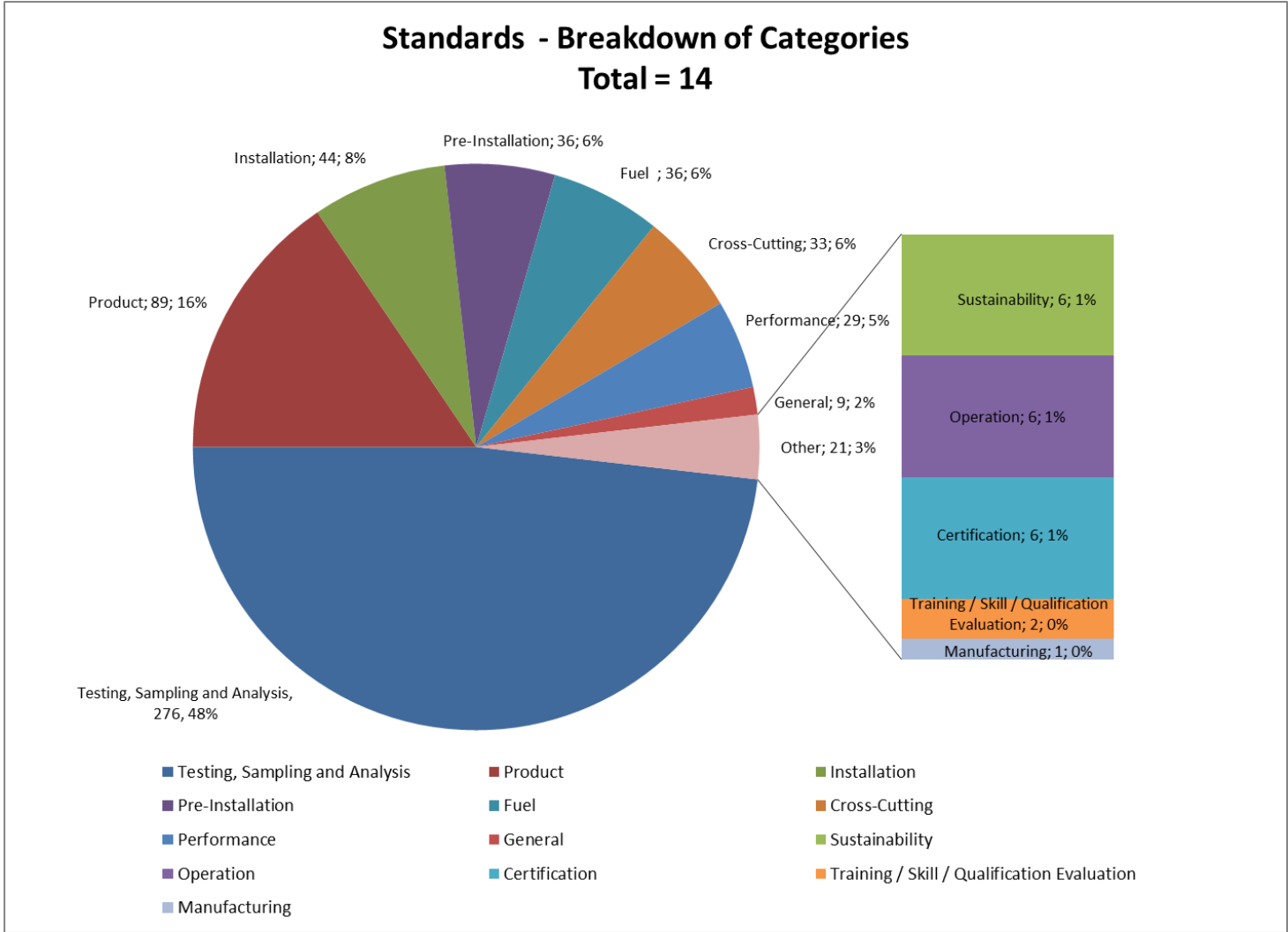


Inventory – 573 Identified Standards





Inventory – 14 Categories





Finding, Examples & Case Studies

- Case studies directly relating to standards and renewable energy are limited
- Examples & case studies used to illustrate issues and learning points from within the report
- Increasing engagement as first choice for policy makers to avoid duplication and repetition which is not compatible – Sustainability of Bioenergy
- Support for confidence in trading of second hand systems which aids resource utilisation
- Ensuring Innovative Products are able to come to market if legislation and regulation utilise standards as compliance methods



Recommendations

- 13 Recommendations, grouped into 4 streams
 - Promotion and knowledge dissemination;
 - Support for broader stakeholder engagement in standardisation;
 - Strategic framework for standardisation in the renewable energy sector; and
 - Specific projects related to standards development.
- Facilitation role required to broker agreements and unlock routes forward
- Projects to ensure that renewable energies are not increasing risks or are reducing risks going forward
- Opening access to resources (not just financial) - thinking how standards makers and regions can engage in the process easier
- Ensuring standards are developed once and appropriately



Summary

- Understanding standards and standardisation to be improved through easier to understand processes and knowledge
- Discussions around who should produce what standards
- Important to have appropriate balance and mix of standards developers which covers global relevance and stakeholder issues
- Ensuring access for all: -
 - Better access to affordable standards
 - Better resources and access for those wishing to engage in the development and updating is essential if balanced, equitable and appropriate standards are to be used globally
- Renewable energy standards becoming more important due to supporting compliance of Legislation, Regulation and Certification (Verification and Auditing)
- Access to Markets New Products



Thank You!
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