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ETechDS Data Normalization and Handling for Modeling Use

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ERC-UCT, Cape Town
22 June, 2012

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Project Objective:

- ✓ Data from ETechDS briefs will be converted into a suitable form for modeling use.
- ✓ Technical and economic data and related ranges will be collected in proper Excel spreadsheets and normalized (i.e. use of consistent units, currency, date, interest and discount rate, where applicable).
- ✓ Missing data (e.g. performance, costs and data projections over time) will be extrapolated or interpolated based on available data, learning curves and expert estimates.
- ✓ The project is part of the completion of the ETechDS project.

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Proposal Submitted by: Giorgio Simbolotti, ETechDS Coordinator

Participating partner: Maurizio Gargiulo, E4SMA S.r.l., Italy

The work to be done consists basically of two steps:

- ✓ 1st phase: the method will be tested with applications to a few technology clusters per sector;
- ✓ 2nd phase: the method will be applied to all technology briefs.

The budget needed for the two phases is estimated at €25,000 and €20,000, respectively.

The present proposal refers to the 1st phase only.

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Project Details:

- ✓ For normalization of economic data, a levelised cost model similar to that used for electricity generation will be applied, to the fuels and energy carriers production as well as to residential and transportation energy services, and goods from the industrial sector.
- ✓ The levelised cost model includes costs for Investment, Operation & Maintenance (Fixom, Varom), Energy, Emissions, Waste Management, Decommissioning (if any) and final Production.

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Deliverables:

- ✓ Pilot Excel spreadsheets (including the levelised cost model for cost normalization) directly linkable to TIMES models under VEDA–Front End (FE) SubRes and possibly under ANSWER-TIMES.
- ✓ Sample technologies for each ETechDS technology sector (Primary Energy, Energy Conversion, Transmission and Distribution, Residential and Commercial, Transportation and Industry);
- ✓ A simple users' guide or how to us

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Relevance to the Annex XII topics:

- ✓ The project will contribute to improving and making available to ETSAP Members the IEA coordinated analysis tools including TIMES models, TIAM and ETechDS.

Time schedule: December 2012

Estimated Costs: Euro 25,000 (Euro Twenty-five thousand)

Expected Benefits for ETSAP:

- ✓ This work is a key to make ETechDS data a useful and friendly tool for MARKAL-TIMES users and,
- ✓ to build a flexible MARKAL-TIMES Technology Repository for ETSAP Members use,
- ✓ non-Members may be requested to pay a fee to use the tool (for ExCo discussion).

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Thank You

For comments and questions

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