

UPDATE TASK 24

Closing the Loop -

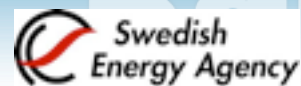
Behaviour Change in DSM: From Theory to Practice



Dr Sea Rotmann and Dr Ruth Mourik ExCo meeting, Utrecht
Netherlands, April 25, 2013

IEA DSM Task 24

participating countries



INTERACTIVE INSTITUTE

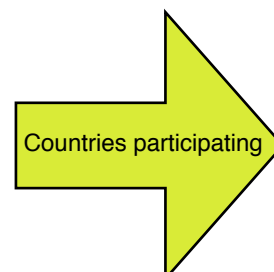


15 Participating Countries

Each country has ExCo member

24 Tasks - each task has Operating Agent/s (OA)

Task XXIV:
Behaviour
Change in DSM
(OAs: Ruth and Sea)

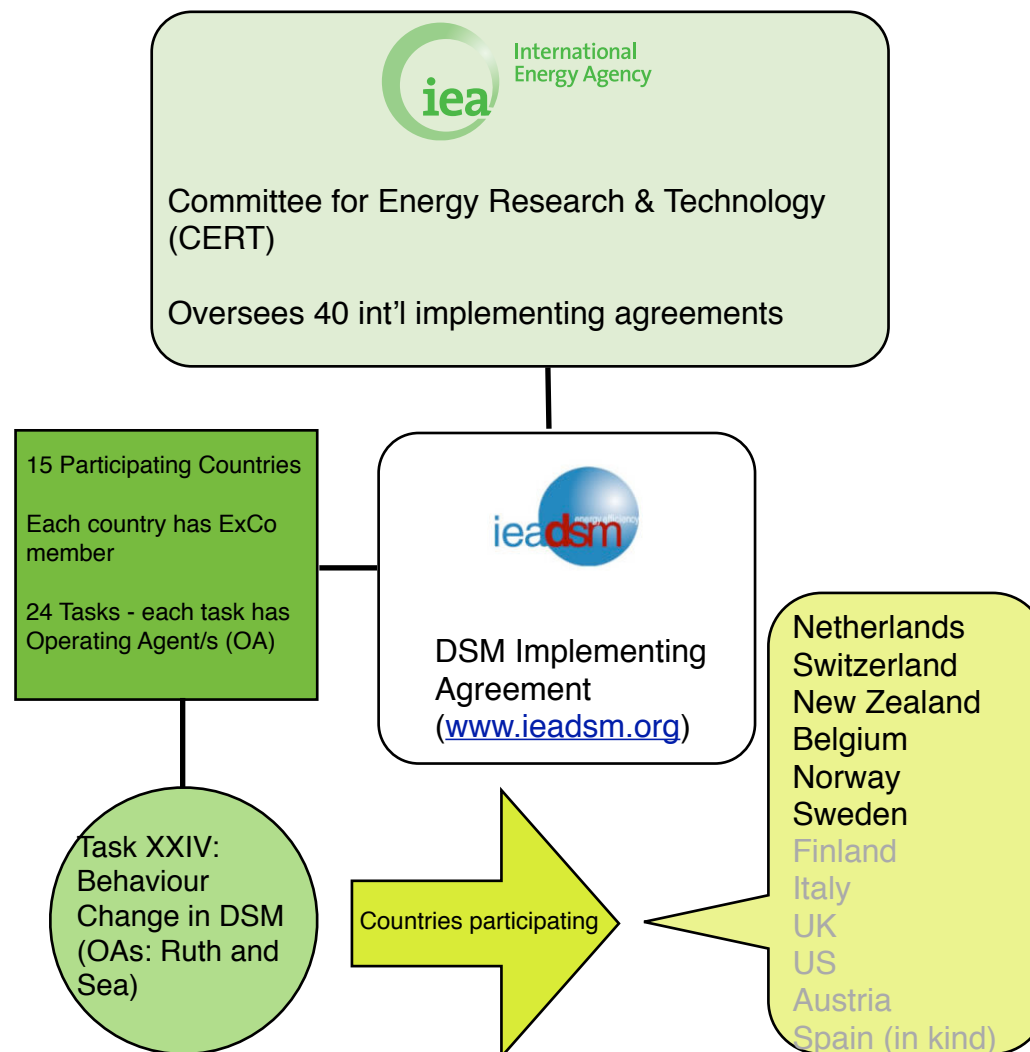


Netherlands
Switzerland
New Zealand
Belgium
Norway
Sweden
Finland
Italy
UK
US
Austria
Spain (in kind)



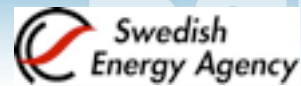
IEA DSM Task 24

participating countries



IEA DSM Task 24

participating countries



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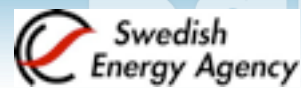
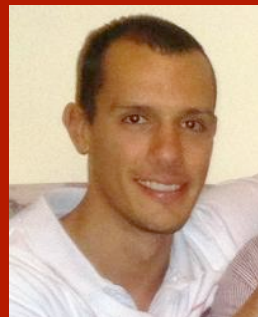
Task XXIV:
Behaviour
Change in DSM
(OAs: Ruth and
Sea)

Countries participating

Finland
Italy
UK
US
Austria
Spain (in kind)

IEA DSM Task 24

participating countries



Task XXIV:
Behaviour
Change in DSM
(OAs: Ruth and
Sea)

Countries participating

Finland
Italy
UK
US
Austria
Spain (in kind)



deliverables

- **D0: Advisory committee of stakeholders** from ExCo, IEA, research, commercial, community, policy and end user sectors providing strategic guidance.
- **D1: Social platform and meeting place** for DSM and behaviour change experts and implementers. Will include wide range of **social media tools** to foster greatest ability to interact, share and discuss. **'Matchmaking'** service to enable trans-national, inter-disciplinary teams of experts and end users to collaborate and bid for funding.
- **D2: Database and/or Wiki** of all collected case studies, best practice, models, frameworks, definitions, contexts, evaluation metrics, references etc.
- **D3: Surveys and post-evaluation** of detailed case studies in priority areas.
- **D4: Tool to evaluate 'successful outcomes'** for variety of stakeholders (political, policy, community, industry, end user).
- **D5: To do's and not to do's, priority research areas and ideas for pilots** and projects for participating countries and stakeholders.

objectives in last 6 months

WOLCU2

1. **Subtask I - Helicopter Overview:**

- Overview of definitions used in Subtask I including how they were derived
- Templates to collect models and case studies completed and filled in by national experts
- Inventory of models, countries and domains that were collected
- Framework to categorise templates adapted from Chatterton and Wilson (2011)
- Wiki to collect and analyse templates
- Interviews with energy professionals telling their 'energy stories'
- Energy stories from participating countries
- 2 national Workshops to continue discussion on models of understanding behaviour

2. **Subtask V - Expert Platform:**


- Continued growth of experts to the platform
- Utilisation of platform, including uploading all content from workshops and Subtasks
- Connect Wiki to platform
- Foster engagement and 'matchmaking' among experts
- Stakeholder engagement plan
- Publicising of Task 24

3. **Subtask 0 - Administration:**

- Advisory Group invitations sent out
- ExCo meetings and report-back
- National expert workshops and webinars

the last 6 months: publications

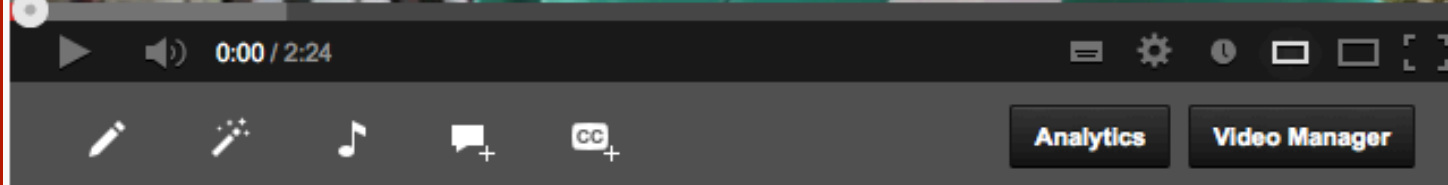
Publications



Task 24 Publications, presentations and reports

- IEA DSM **Spotlight 48** Issue - on Dutch workshop
- **IEA DSM Website** Task 24 (updated)
- **EEIP Magazine** (column on corporate behaviour)
- **Sea Rotmann interview** with energynet.de (podcast)
- Sea Rotmann **eceee column** (on difficulty of doing good energy efficiency policy #2)
- Sea Rotmann **Global Energy Professionals blog** (Why is energy efficiency so unsexy?)
- New **merged Template** for Models of Understanding Behaviour and Theories of Change via use of actual case studies (template)
- **Inventory** of models/countries/case studies (wiki table)
- **Overview of definitions** and how they were derived for Task 24 (powerpoint)
- New IEA DSM **Task 24 Pecha Kucha** presentation (powerpoint/film)
- **Pecha Kucha** presentation NERI workshop 'Why is energy efficiency so damn unsexy?' (powerpoint)
- **NERI Task 24** presentation (powerpoint)
- Task 24 presentation at **IEA Secretariat** Roundtable in Paris (powerpoint)
- 21 new Interviews of **experts' own energy stories** (film)
- **New Zealand's Energy story** (powerpoint/film)
- UKERC Meeting Place **report of Oxford** workshop (report)
- **NZ stakeholder analysis** (report)
- **NZ sector energy stories** - industry, research, government (powerpoint/film)
- **3 NZ and 1 Dutch case study** (powerpoint)
- **Models of Understanding** - definitions (powerpoint/film)
- **Implementation Bloopers** in Policy (powerpoint/film)
- **Feedback from NZ Workshops** on behaviour change problems in from 3 stakeholders' perspective (film/notes)
- **Feedback from Dutch Workshop** on reasons DSM programmes failed (powerpoint)
- eceee Summer Study **peer-reviewed paper** (scientific publication)
- What is **Evolutionary Psychology** (presentation in Dutch)

energy stories: personal



IEA DSM Task 24 Energy Stories: Gerri Ward



Sea Rotmann · 24 videos

Channel settings

1 view

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Janet Stephenson interview



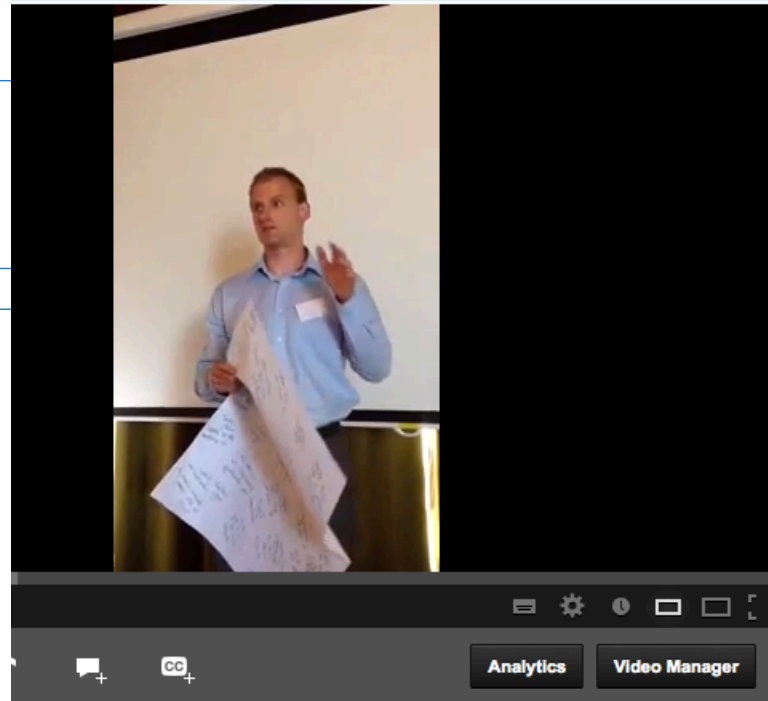
Sea Rotmann interview

energy stories: sectoral

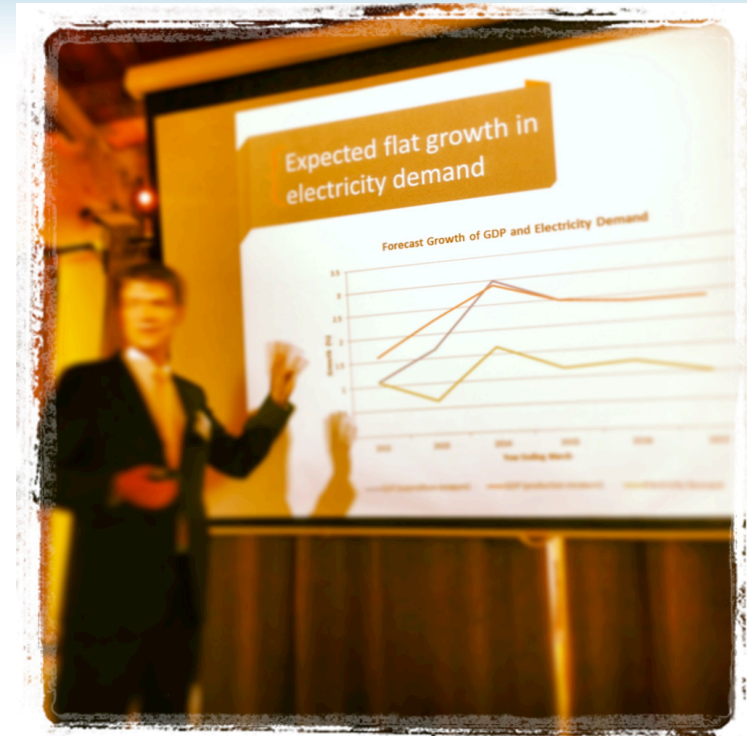


Fuel efficient driving behaviour in the light vehicle fleet

15 February 2013 | Jörn Scherzer | Transport Partnerships

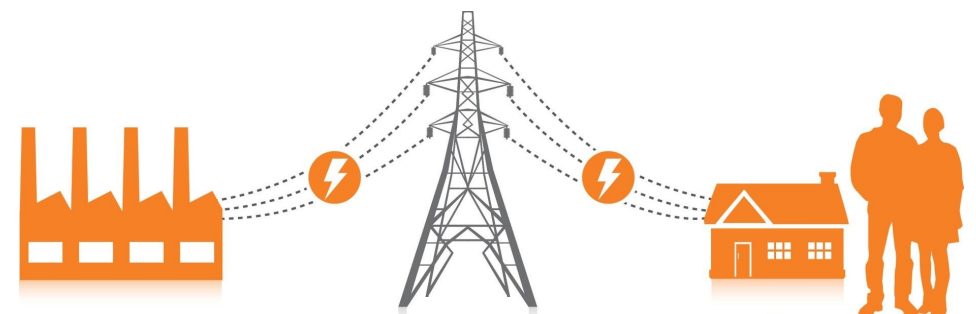
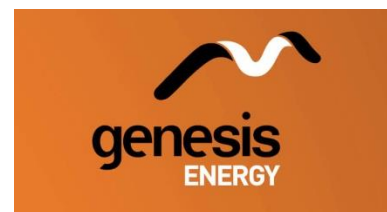


Jörn Scherzer on transport issues



Energy Behaviour Challenge 1

Changing household energy cultures
A research perspective



energy stories: national

ULB

IEA DSM – Task XXIV



Belgian Story

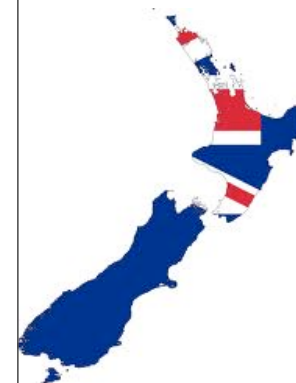


Brussels, September 7, 2012



demand-side
The New Zealand energy
story ^

Sea Rotmann and Janet
Stephenson





social media in Task 24



@IEADSM
@DrSeaRotmann



IEA DSM facebook Group



IEA DSM LinkedIn Group



Expert platform:
www.ieadsmtask24.ning.com



Task 24 Wiki:
www.ieadsmtask24wiki.info



IEA DSM website:
www.ieadsm.org



Behaviour Change & Energy News



www.youtube.com/IEADSM



Pearltree: drsearotmann



Instagram: drsea77



Storify: DrSeaRotmann



WORDPRESS



the last 6 months: workshops & conferences

Date	Place	Total # Experts	# of countries	Type of meeting	Government	Business and NGO	Academic
12/11/12	online	6	5	Expert Webinar		2	4
20/12/12	Utrecht, NL	22	1	Stakeholder Meeting NL	1	14	7
7/2/13	online	6	5	Expert Webinar		2	4
15/2/13	Wellington, NZ	50	4	Expert Workshop	15	15	20



the last 6 months: workshops & conferences

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15/2/13	Wellington, NZ	50	4	Expert Workshop	15	15	20



Date	Place	Total # Experts	# of countries	Type of meeting
17/12/12	Wellington, NZ	10	1	Stakeholder update NZ Government
13-14/2/13	Wellington, NZ	100+	6	National Energy Research Institute conference 'Energy at the Crossroads'
13/3/13	Paris, FR	30+	28	Presentation to IEA Secretariat Behaviour Workshop 'Choices, Decisions and Lifestyles Roundtable'

deliverables - update

D0

- **D0: Advisory committee of stakeholders** from ExCo, IEA, research, commercial, community, policy and end user sectors providing strategic guidance.

Invitations sent to following people:

IEA DSM: Rob KOOL, NL

IEA Secretariat: Sara PASQUIER, FR

Research: Skip LAITNER, US

Industry: Hans de KEULENAER, European Copper Institute, BE

Consultancy: Rod JANSSEN, Energy in Demand, FR

Government: Adam COOPER, DECC, UK

Local Government: Anthony van de VEN, Eindhoven Municipality, NL

Technology Developer: Tom LEYS, Gridspy, NZ

Social Media: Dusan JAKOVJLEVIC, EEIP, BE

NGO: Nils BORG, ECEEE, SE

Utility: Scott NEUMAN, Opower, US

1st virtual meeting proposed September: to feedback on results from Subtask I



DI: subtask V - expert platform


Dr Sea Rotmann Sign Out Search IEA DSM Task 24

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TASK 24 NETWORK
CHANGING BEHAVIOR FOR DEMAND SIDE MANAGEMENT

All Pages My Pages + Add

Welcome to Task 24!



Members Edit

Vicente Carabias	Ruth Mourik	Nico Lauer	Fiona Coyle	Joe Hallberg	Sandra Bellekorn
Chris McArthur	Oiga Sachs	Dr Sea Rotmann	Matt Batey	Henrik Karlstrom	Jenny Palm
Anne Bengtson	J Richard Snape	Klopfert Frédéric	Ruth Rettie	Charlotte Kobus	Charlie Morris-Marsham

+ Invite More View All

Forum Edit

Topics and themes for the case study
Started by Sylvia Breukers in Subtask 2 - Detailed case studies. Last reply by Vicente Carabias yesterday.
2 Replies 1 Like
Hi All, Sea lists under subtask II themes to be further addressed in detailed case studies and some three themes to really focus on. I understand that this list is not carved in stone and would like...
Continue
Tags: pilots, studies, case, inventory, stakeholder

How useful is social media to DSM?
Started by Dr Sea Rotmann in Uncategorized discussions. Last reply by Dr Sea Rotmann Aug 7.
19 Replies 3 Likes
Here is a great infographic on how much energy could be saved if social media users could be made to engage in energy-saving behaviours. Is it almost like a separate, virtual target group of early...
Continue
Tags: behaviour, change, saving, energy, media

What is Behaviour Change... To YOU?
Started by Dr Sea Rotmann in Uncategorized discussions. Last reply by Dr Sea Rotmann Jul 18.
7 Replies 0 Likes
Today I talked to my friend Nick Potter, an amazing behaviour change and storytelling expert from New Zealand. We were trying to figure out what software or online tools to use to best collect and...
Continue
Tags: definition, change, behaviour

Household behaviour change
Started by David Stephenson in Uncategorized discussions. Last reply by David Stephenson Jul 18.
1 Reply 0 Likes
I am interested in household behaviour change and how it can be supported by technology. I am looking for...
Continue
Tags: household, behaviour, change, technology

Top Content Edit

- Topics and themes for the case study
Posted by Sylvia Breukers on July 3, 2012
- Invitation to our Expert Workshop in Brussels, Sept 7
Posted by Dr Sea Rotmann on August 11, 2012
- CLASS 5 Energy
Added by Joe Hallberg on July 30, 2012
- CLASS 5 Energy: Engage People
Added by Joe Hallberg on July 30, 2012
- CLASS 5 Energy
Added by Joe Hallberg on July 30, 2012

View All

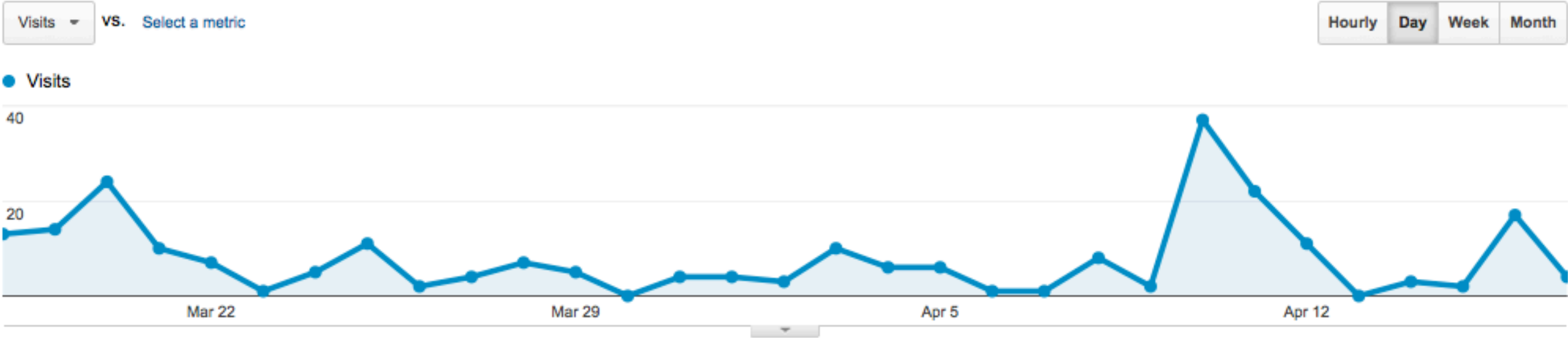
Latest Activity Edit

Facebook Twitter LinkedIn YouTube WordPress Pinterest

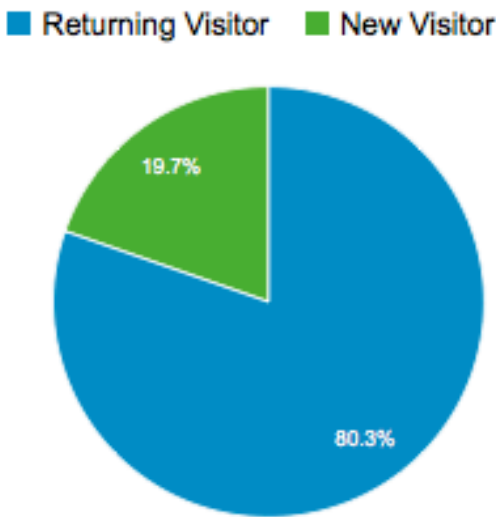
- 70 videos
- 59 photos
- 3 blogs
- 12 events
- 18 discussion fora
- 2 member groups

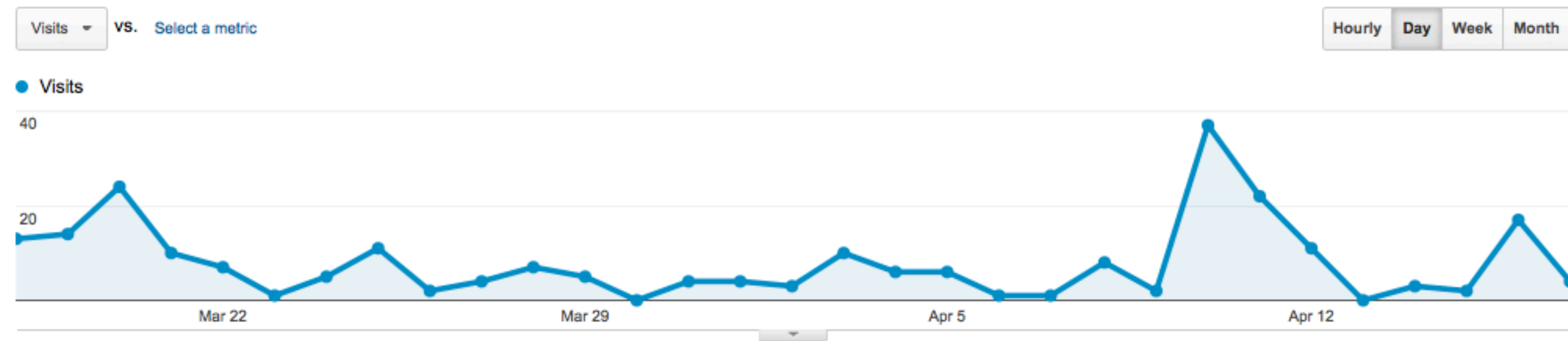
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Expert platform currently has over 150 experts from 20 countries and 7 main sectors.

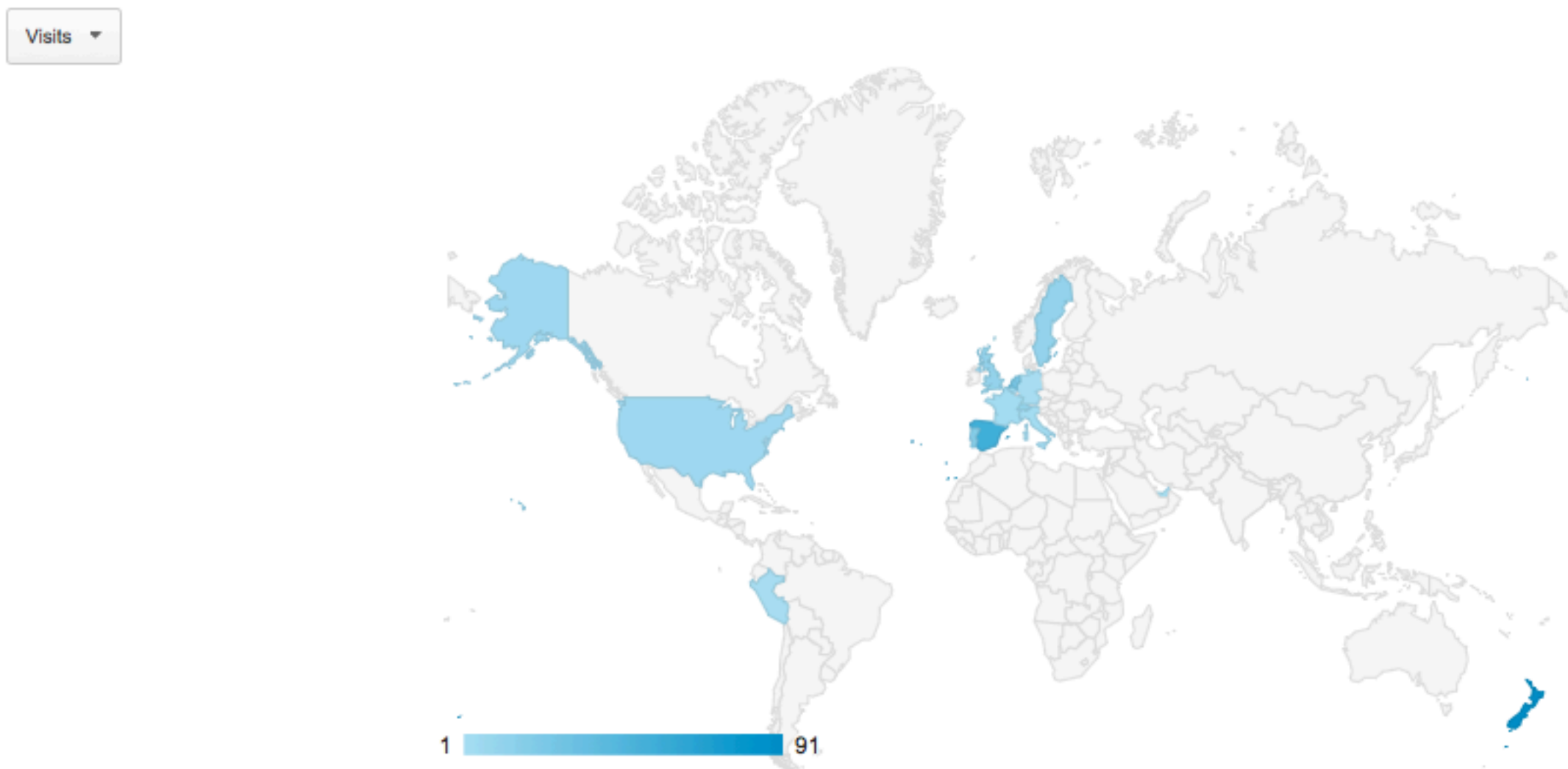


69 people visited this site





69 people visited this site




Visits	Pages / Visit	Avg. Visit Duration	% New Visits	Bounce Rate
244	5.67	00:05:50	19.67%	48.36%
% of Total: 100.00% (244)	Site Avg: 5.67 (0.00%)	Site Avg: 00:05:50 (0.00%)	Site Avg: 19.67% (0.00%)	Site Avg: 48.36% (0.00%)



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YouTube
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IEADSM Task 24 Wiki
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subtask_3
subtask_4
subtask_5

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Sub Task 1 – Helicopter Overview

Edit

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- Sub Task 1 – Helicopter Overview
 - Background
 - Objectives
 - Deliverables

Background

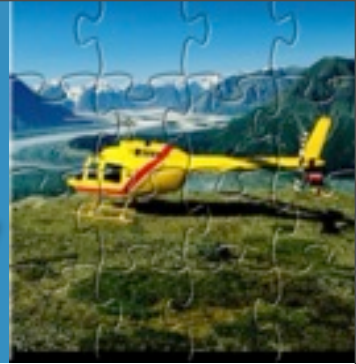
Achieving a lasting reduction of energy consumption is a huge challenge for policymakers and DSM practitioners. An estimated 30% of energy demand is locked in the so-called 'behavioural wedge'. This 'wedge' includes people's energy-using habits, as well as their purchasing decisions of energy (in)efficient technologies. Both of these behaviours will be focused on in this Subtask.

A fundamental challenge is how to understand energy behaviour change processes. There are diverse social scientific models of understanding behaviour, but to date there has been little interaction and exchange between the various models and disciplines. As a first step in the challenge of moving towards an interdisciplinary model of better understanding behaviour change, we will present an inventory of what the diverse (sub)disciplines have to offer both theoretically and empirically. A structured draft overview of the diverse models of understanding of behavioural change (in relation to Energy DSM) is provided below. The Subtask will develop this overview with input from the national and contributing experts. In addition, short (140 characters to be 'tweetable') definitions of each model/framework/discipline will be developed and underpinned by a range of empirical (case) studies that use or operate in these models/frameworks /disciplines. Pros and cons of each approach will be discussed.

The inventory is done at the level of conceptual/theoretical frameworks that provide explanations of how behavioural changes come about. When assessing the models' (potential) contribution to understanding energy DSM and behavioural change, we will also attempt to address the following underlying key issues and challenges. One of the key challenges facing energy DSM initiatives (and policy in general) is finding the right ways to monitor and evaluate the initiative and its impacts. Definitions of success can refer to effectiveness in terms of reaching the set goals in a cost-and resource-efficient way. They can refer to 'outputs' (eg number of houses insulated under a government insulation subsidy scheme) or 'outcomes' (eg overall health improvements of occupants from insulated homes). Although this can work well for particular initiatives and programmes, it may fall short in the following ways:

- It does not allow for evaluating 'learning' while in fact social learning (potentially leading to a change in 'social norm') might be a crucial criterion to account for the occurrence of behavioural change
- It does not consider that DSM initiatives may change along the course of time to adapt to changing circumstances ('double loop learning').

subtask I - Helicopter Overview



Repertoire of Human Behavior



- Overview of models, theories, frameworks used in case studies
- Overview of definitions
- Inventory of experts
- Inventory of evaluation metrics and contexts
- Navigation tool to translate theory to be useful by practitioners

the hitch-hiker's guide to the galaxy

BABEL FISH



YOUR OWN MOUTH **POOFLE SHNUK**
IT FEEDS ON BRAIN WAVE ENERGY, ABSORBING ALL UNCONSCIOUS FREQUENCIES AND THEN EXCRETING TELEPATHICALLY A MATRIX FORMED FROM THE CONSCIOUS FREQUENCIES AND NERVE SIGNALS

worked examples in Task 24

Case studies collected for IEA DSM Task 24 in transport, building retrofits, SMEs and smart metering Note: Blue boxes denote government-led policies and programmes, green boxes denote business, research or community-led programmes and pilots

Domain/Country Cases and used theories/models	Netherlands	New Zealand	Switzerland	Italy	Austria	Norway	Sweden	Belgium	UK	Other countries
Smart Metering	Jouw Energie Moment Theories/Models used: Expectancy Value Theory Design with Intent Interpretation for sustainable behaviour	Responses to Time Varying Prices for Electricity (Otago Uni) Theories/Model used: Classical Economics and marketing	Smart Metering Zurich Pilot EWZ and EKZ Theories/Model used: behavioural economics and social norms/comparisons	Time of Use Tariff Theories/Models: Classical Economics		Demosteinkjer Theories/Models: Theory of Planned Behaviour	Clockwise Theories/Models: Constructivist Learning Theory Shared learning		Rettie, Ruth CHARM Theories/Models used: social norms approach practice theory	Spain (Juan Pablo Garçia): VERDIEM Theories/Models: Classical Economics
			Smart Metering EKT Dietikon Theories/Model used: behavioural model of residential energy use by Raaij & Verhallen behavioural economics and social norms/comparisons							Portugal (Joane Abreu): Smart meter feedback in North Theories: Nudge, classical economics, moments of change
			Munx Repower website Theories/Model used: behavioural economics, social norming							
Retrofitting	Blok voor Blok aanpak, retrofitting programme Theories/models used: Behavioural economics	Warm Up New Zealand: Heat Smart Theories/Models used: social marketing; social norms; classical economic; TPB	Swiss Building Retrofit Program Models: Classical Economics			Retrofitting of Myhrenenga Housing Theories: TPB				
		Kapiti Coast Eco Advisors: Home Energy Advice Theories/Models: based on TPB	2000 Watts Society (housing) Models: Ethics, long-term visioning							
SMEs	To be decided upon	Energy Cultures in SMEs Theory/model used: Energy Cultures Interpretative qualitative research	Energy-Model and SME-Model from (EnAW) Theories/Models used: Classical Economics Social norm					Build4Change Model: Nudge		
		EECA SME Crown Loans Scheme Theory/model used: originally based on TPB; changed to social learning and social norm theories								
Mobility	Het Nieuwe Rijden (the New Driving) Theories and models used: Psychology: Henry A Murray (1938) and the acceptability/availability model of behaviour by Rose (1990).	Active a2b Theory/models used: Norm Activation Theory Elaboration Likelihood Model Stern's Principles for Intervening Triandis TIB Lewin's Unfreezing/Refreezing McKenzie-Mohr	2000 Watt on mobility Models: Ethics, long-term visioning				Stockholm congestion tax Models: activity based models		Chatterton & Wilson Framework Combining individualistic (eg Triandis) and societal (Practice theory) approaches to help UK policymakers	Kevin Luten UrbanTrans (Australia) Transport behaviour change based on BJ Fogg
		NZ Post Transport Driver behaviour training Theory/models used: Value Action Gap Theory	Fuel consumption of newly purchased cars Theory of Planned Behaviour (TPB) and Norm-Activation Model (NAM)							
		EECA Driver Behaviour Pilot Theory/Models used: in development, but several behavioural economics and social psychology models								

some of the best cases



TRANSPORT: The New Driving, Netherlands

Models used: Psychological models



BUILDING RETROFITS: Retrofitting Myhrenenga Housing, Norway

Models used: Theory of Planned Behaviour



SMART METERING: Smart metering pilots, Switzerland

Models used: Behavioural Economics, social norming



SMEs: Crown loans for SME energy savings, New Zealand

Models used: Classical economics then shared learning

objectives for the next 6 months

Subtask I - Helicopter Overview:

- Finish collection of templates of models and case studies
- Finish analysis of templates and interactive report-back
- All information to be put onto wiki
- Analyse interviews with energy professionals telling their 'energy stories'
- Collect more energy stories from participating countries (Norway, Netherlands, Switzerland)

Subtask II - Case studies

- Collection of detailed case studies and best practice in four overarching themes
- Includes (filmed) interviews in Austria, Norway, Italy, UAE, Switzerland

Subtask III - Evaluation Tool

- Template to enable better evaluation of successful behaviour change outcomes depending on the stakeholder point of view
- Based on 'Beyond kWh' paper by Karlin and Ford (2011)

Subtask V - Expert Platform:

- Continued growth of experts to the platform
- Utilisation of platform, including uploading all content from workshops and Subtasks and Wiki
- Create content including blogs and webcasts for DSM University
- Update whole platform to Ning 3.0 when it goes live
- Continue to foster engagement and 'matchmaking' among experts - tell the stories
- Continue publicising of Task 24 - including 4 international conferences (ecee, BECC, UAE, ELCAS)

Subtask 0 - Administration:

- Advisory Group meeting in September (virtual)
- ExCo meeting and report-back Switzerland
- National expert workshops and webinars (NO, CH, 2 webinars)
- ECEEE summer study, ELCAS, BECC conference paper presentations

Description personmonths/costs	Cost (Euro)	personmonths Sea Rotmann per subtask	personmonths Ruth Mourik per subtask	total costs Sea Rotmann	total costs Ruth Mourik	total sum
Subtask 0	4500	3	1.5	13500	6750	20250
Subtask 1	4500	6	3	27000	13500	40500
Subtask 2	4500	6	3	27000	13500	40500
Subtask 3	4500	6	3	27000	13500	40500
Subtask 4	4500	5	2.5	22500	11250	33750
Subtask 5	4500	4	2	18000	9000	27000
Total personmonths/costs		30	15	€162000	€54000	€202500
Description costs	Costs					
OAs travel costs	55000	costs travel Sea Rotmann and Ruth Mourik including extended stay in Europe of Sea Rotmann and frequent face to face meetings RM and SR (6 times travel SR to Europe from New Zealand)				
stakeholder analyses	5000	separate meetings and costs associated with stakeholder analyses				
website and data management	10000	including website, webinars, VC, social media, blogs/vlogs, database etcetera				
overheads and incidentals	7500					
Total	€77500					€280000

the budget: current



- received to date: €110,000
- travel costs and film, websites, administration etc to date: €27,000
(Ruth €5,000; Sea ~€22,000)
- person months to date: ~ 17 months (12m Sea; 5m DuneWorks)
€76,500
- in-kind contributions from countries and experts: >€60,000
(UKERC Meeting Place alone spent >£35,000 on Oxford workshop; NZ sponsored NZD\$3600 on workshop in Wellington; NZ ExCo sponsored NA OA NERI Conference attendance NZD \$1000)
- experts providing in-kind expertise from: France, Spain, Italy, UK, Sweden, Finland, Austria, Germany, Australia, Portugal, UAE

timetable

Subtasks	2012		2013		2014	
Subtask 0 - Admin						
Subtask I - Helicopter Overview						
Subtask II - Case Studies						
Subtask III - Evaluation Template						
Subtask IV - Recommendations						
Subtask V - Expert Platform						

- starting date according to work plan: February 2012
- official starting date according to ExCo (Espoo): July 2012
- If we get 8 or more participating countries (Austria and/or UK), our task will be extended at no extra cost until December 2014

questions or comments?

