PUBLIC POLICY AND ENERGY MODELLING

What use is the SEE 2050 Energy Model to policy makers in the region ?

PHLG Meeting
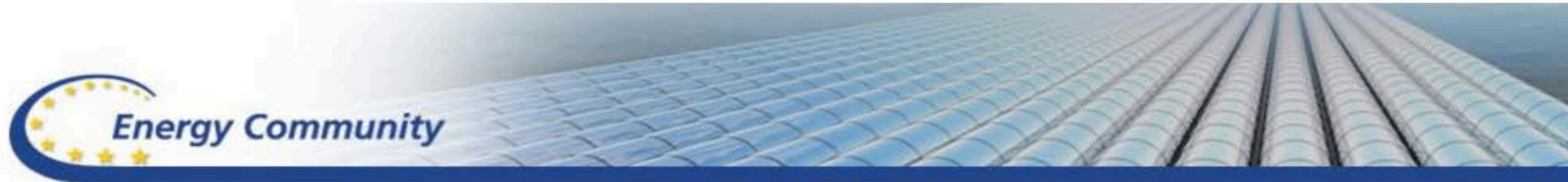
Energy Community, Vienna,

December 17th   2015

Supported by:

EU Parliament defines Energy Community as integral part of the Energy Union and pivotal arm of EU's external energy policy

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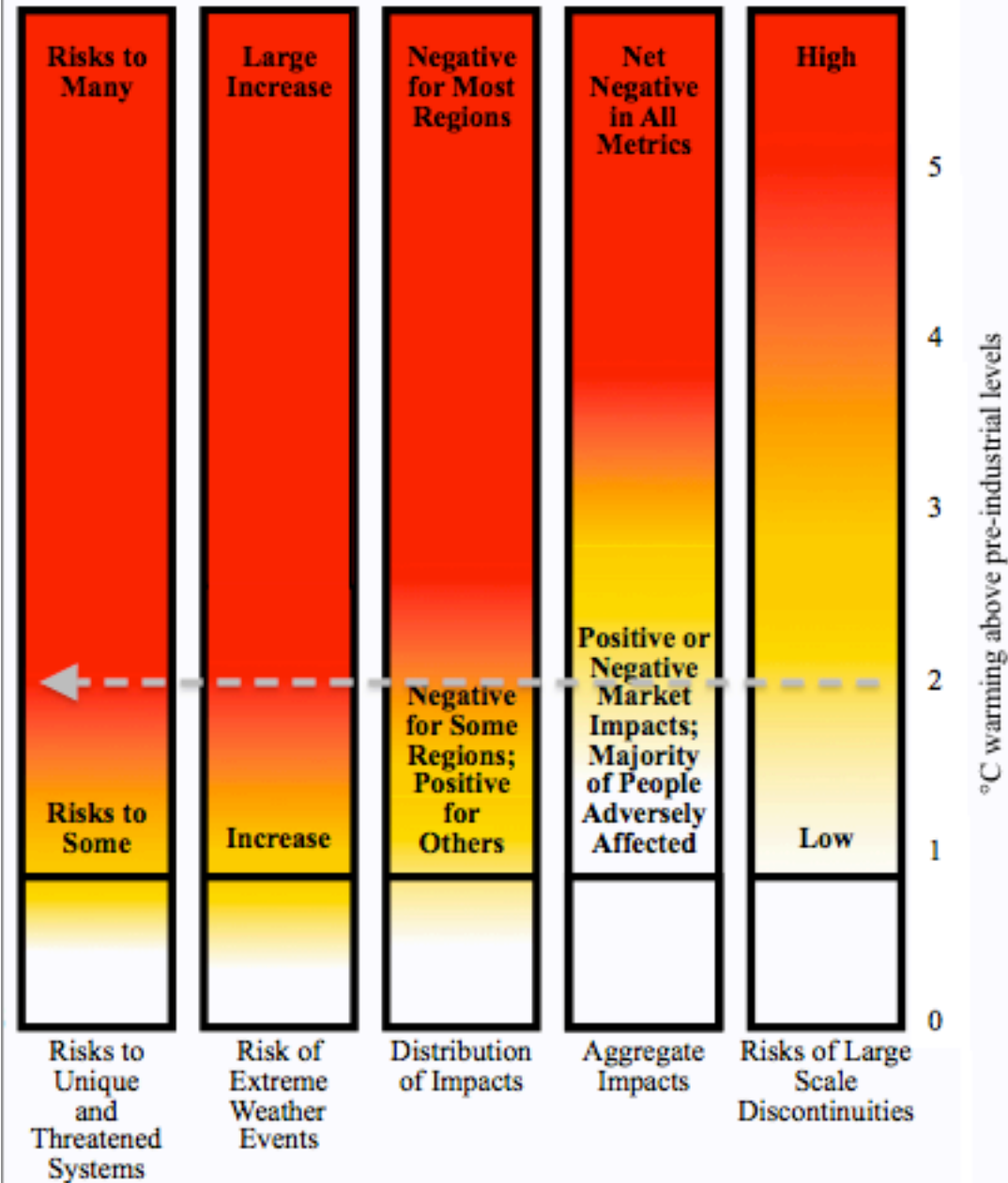
WHAT ARE THE KEY EU ENERGY TARGET…?

- EU Target is to reduce GHG Emissions by 80% by 2050 based on a 1990 baseline

- THE INTERIM EU Target is to reduce GHG Emissions by 40% by 2030 based on a 1990 baseline

Supported by:

two°
COP Paris reduced this tolerance level to 1.5 Degrees

Supported by:

"Burning embers" diagram, with 2°C threshold marked. (Smith et al. 2009)

However the voluntary Intended Nationally Determined Contributions (INDCs) at the heart of this agreement do not yet add up to a 2-degree limit, much less a 1.5-degree limit. And our region includes some of the greatest offenders.
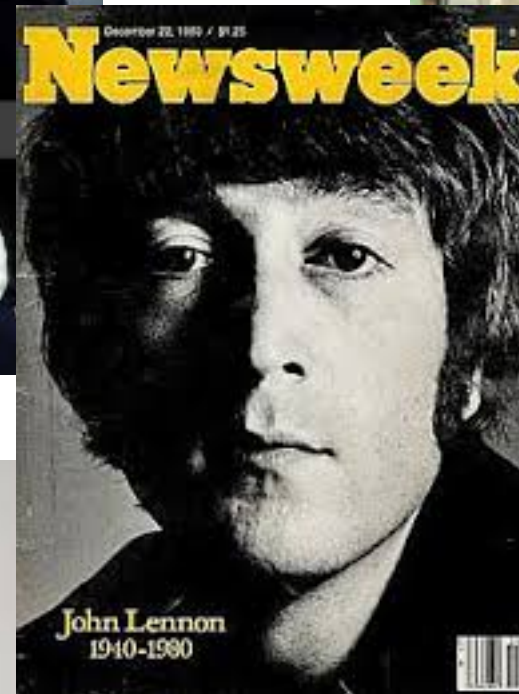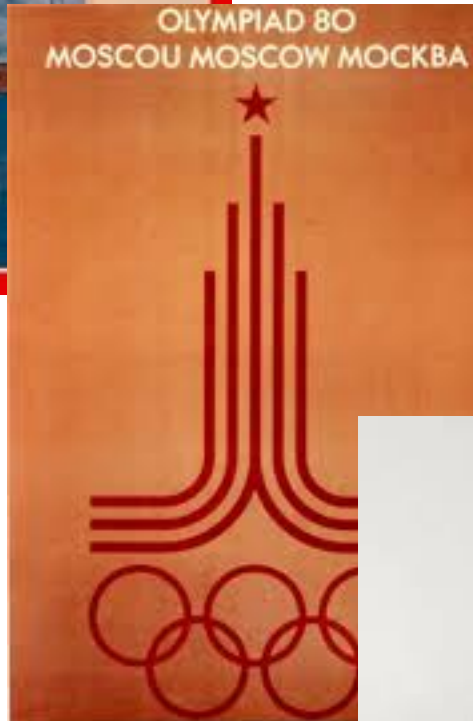
TIME

MAN OF THE YEAR

OLYMPIAD 80
MOSCOU MOSCOW MOCKBA

gettyimages
Gamma-Rapho

Newsweek

December 22, 1980 / $1.25

John Lennon
1940-1980

IBM

Main objective of the **SEE SEP** project is fact based dialogue with key decisions makers to influence policy and practice for a more sustainable energy system in South East Europe, aligned with key EU Policies and Directives.

18 Civil Society Organizations

Organizations	Role
See Change Net	Lead Partner
WWF, CEEBW, CAN	EU Partners
EDEN center, Ekolevizja group	AB
CPI, CZZS	BA
DOOR, FSO	HR
ATRC	KV
Analytica, Front 21/42, Ekosvest	MK
Green Home, MANS	ME
CEKOR, NGO Fractal	SE

NOTE: 1) This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence. Hereinafter referred to as Kosovo; 2) According to the UN, the official name for Macedonia is The former Yugoslav Republic of Macedonia. Hereinafter referred to as Macedonia.

Supported by:

What we did to make these models:

SEE 2050 Energy Model Data Collection 2013 - 2014	**Development of SEE Low Carbon Roadmap:** • **Analysis of demand and supply sectors** • **Dozens of reports** • **Hundreds of expert meetings** • **Tens of thousands of data points** • **7 national and 1 regional model**
Consultations and Call for Evidence 2015	Cross checking and calibrating of data and assumptions: • **Sectoral Consultations 220 experts/policy people** • **Call for Evidence 500 contact points** • **Web visits 1,000** • **Call for Evidence Review published mid 2015**
Energy Community hosting of web based Tier 2 and Tier 3	**Launched of technical model** http://www.see2050carboncalculator.net/ **Launch of video game**

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Supported by:

CAPEX, by energy type, in €/kW

Technology	2010	2015	2020	2025	2030	2035	2040	2045	2050
Coal	2300	2300	2300	2300	2300	2300	2300	2300	2300
	1600	1600	1600	1600	1600	1600	1600	1600	1600
Gas	800	738	723	712	701	686	672	657	642
	700	688	674	664	654	640	626	612	599
Onshore wind	1550	1400	1330	1313	1295	1292	1288	1274	1260
	1300	1200	1140	1125	1110	1107	1104	1092	1080
Large hydro	3320	3320	3320	3320	3320	3320	3320	3320	3320
	1270	1270	1270	1270	1270	1270	1270	1270	1270
Small hydro	5000	5000	5000	5000	5000	5000	5000	5000	5000
	1270	1270	1270	1270	1270	1270	1270	1270	1270
Solar PV	1200	1127	868	614	361	338	316	287	259
	1000	869	669	474	278	261	243	222	200

Table: Capital costs for different technologies in SEE – Highs and lows, in EUR/kW

Supported by:

On shore wind capacity, by country

Country	Average capacity factor in 2010	Average capacity factor in 2050	Maximum technical potential in 2050
Albania	25%	35%	2.55 GW
BiH	31%	39%	7.55 GW
Croatia	31%	33%	4.97 GW
Kosovo	25%	33%	1.55 GW
Macedonia	28%	33%	1.25 GW
Montenegro	32%	37%	0.72 GW
Serbia	30%	39%	10.36 GW

Table: Onshore wind capacity factors (%) and maximal technical potential (GW) in the region

Supported by:

Solar PV capacity, based on roof top potentials

Country	L1 20%	L4 Maximum Technical Potential
Albania	0.58 Gw	2.88 Gw
BiH	1.96 Gw	9.79 Gw
Croatia	2.78 Gw	13.91 Gw
Kosovo	0.9 Gw	4.50 Gw
Macedonia	1.06 Gw	5.29 Gw
Montenegro	0.35 Gw	1.73 Gw
Serbia	6.13 Gw	30.67 Gw

Supported by:

SEE 2050 Energy Model - Tier 2
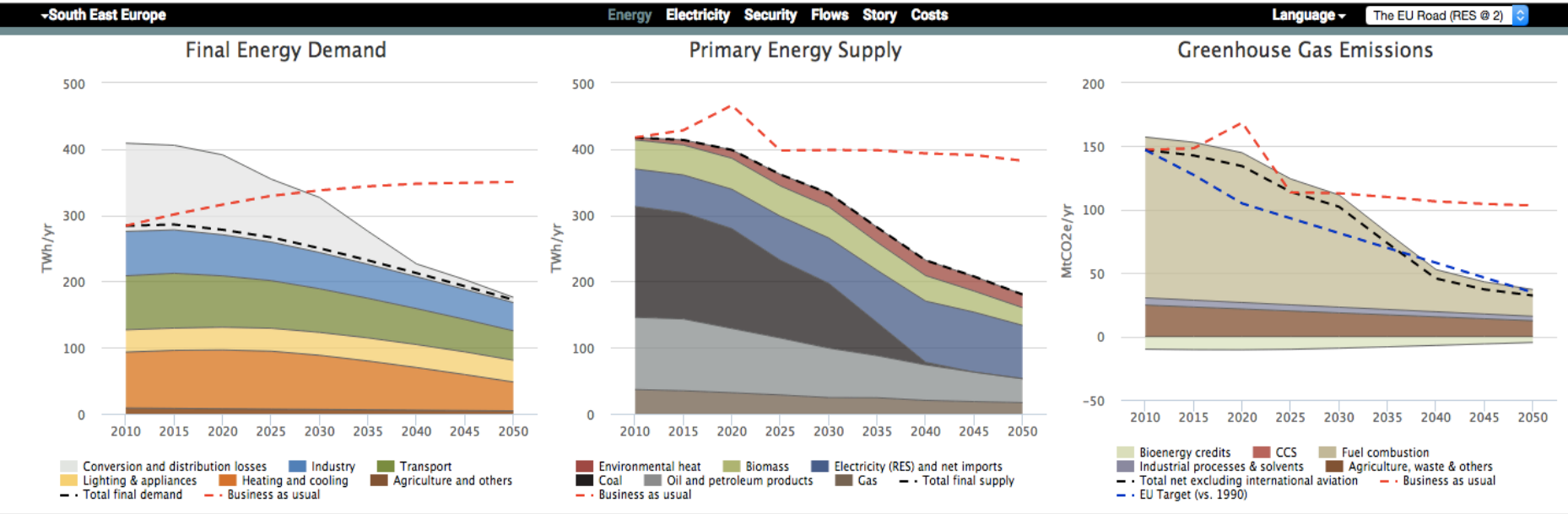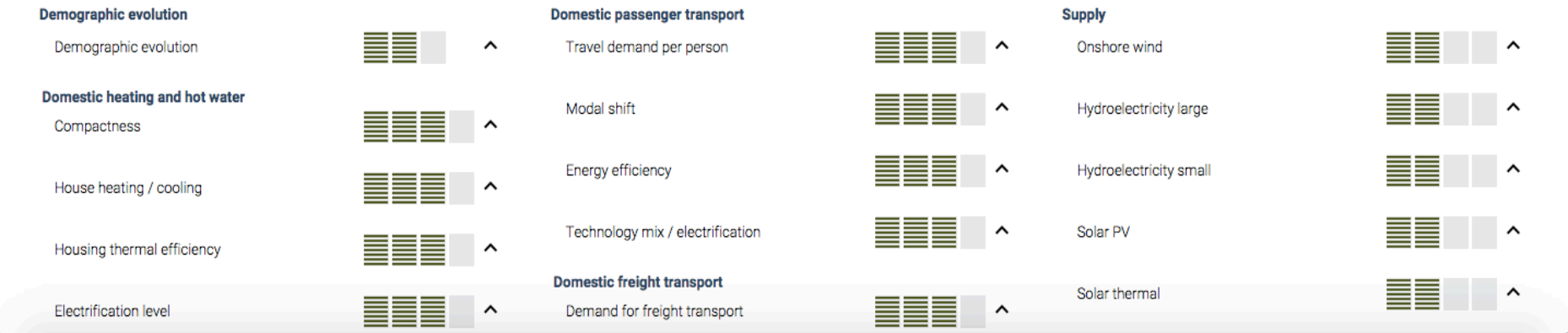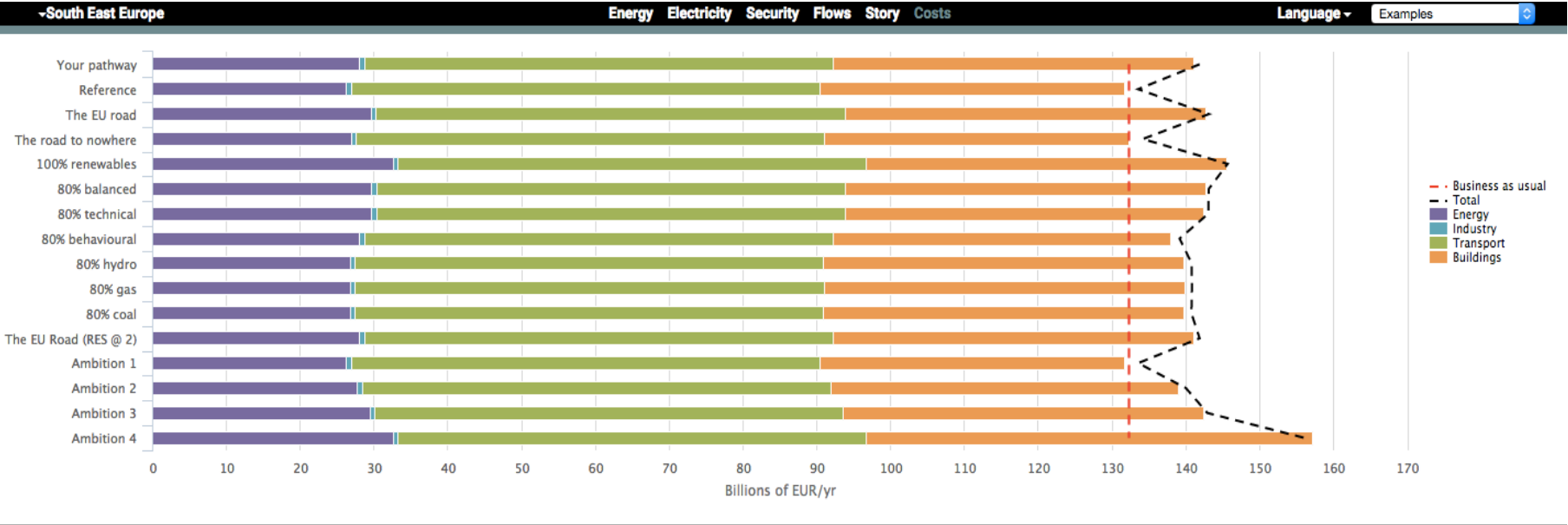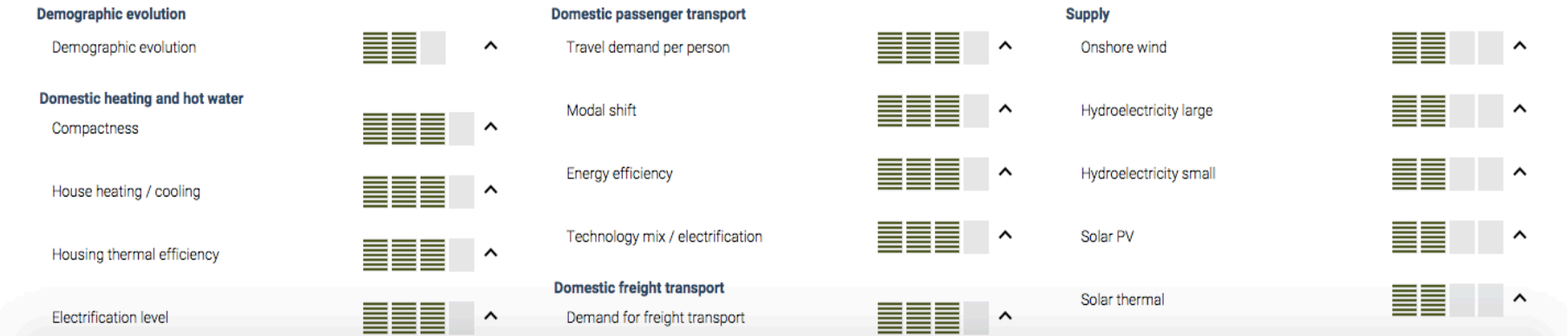

7 Models, One for Each Country

One regional interactive model

Demand Levers 28

Supply Levers 14

Designed to engage policy makers

Agreed to be hosted by Energy Community Website

Supported by:

SEE 2050 Energy Model - Tier 2

- 7 Models, One for Each Country

- One regional interactive model

- Demand Levers 28

- Supply Levers 14

- Designed to engage policy makers

- Agreed to be hosted by Energy Community Website

Supported by:

2050 Regional Energy Model – Video Game

7 Models, One for each Country

Increase number of Models in world by 1/3

Global first regional interactive model

Supported by:

2050 Energy Model – Interactive Video

Simplified to 6 Demand Levers

Simplified to 6 Supply Levers

Designed to attract
public discussion

Opportunity to become focus
For Global 2050 Calculator
Meeting in 2017

Supported by:

Thank you.

Questions on our the 2050 Calculator more than welcome!!!

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