



# ***Geothermal Energy R&I in the Energy Union***

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Mayors' Geothermal Club  
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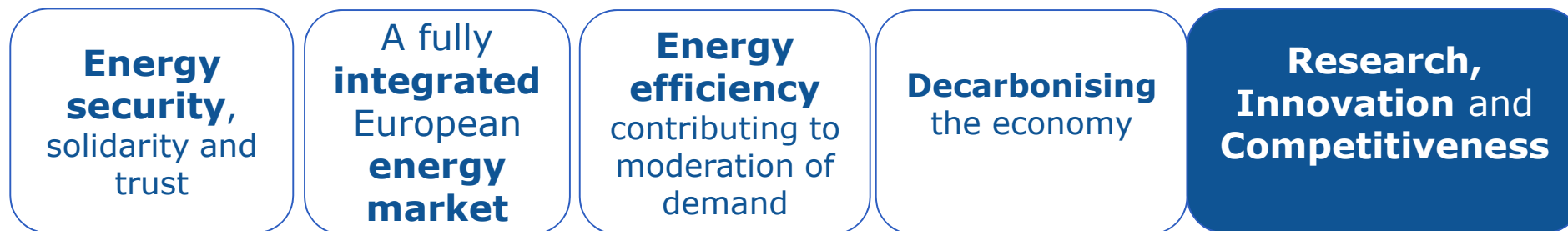
# Major Role of R&I in the Energy Union

***"...there is a strategic focus in the implementation of the Energy Union on research and innovation, and on **making the EU the world number one in renewables.**"***

President Jean-Claude Juncker  
State of the Union Progress Report  
Strasbourg, 9 September 2015



# 5 Pillars of the Energy Union



**Energy R&I policy deliverables in 2015-16**





## ***The SET Plan: A showcase for Open Innovation***

Creating an open **innovation ecosystem** relying on research via

- Facilitating greater access to **risk-financing**:
  - Boosting investment in Energy R&I: e.g. the new **InnovFin Energy Demo Projects**, supporting first-of-a-kind industrial projects (*e.g. renewable energy technologies, fuel cells*).
- Ensuring **coherence and coordination of funding** between **Horizon2020**, national programmes/funds and other EU funds like:
  - **Innovation Fund/NER400** (*innovative renewable energy technologies*), **EFSI** (*close-to-market energy projects*), **Cohesion Policy funds 2014-20** (*Smart Specialisation Strategies*), **Modernisation Fund** (*10 low-income MSs*)
- Checking that appropriate **regulatory frameworks** are in place and identify bottlenecks to the deployment of new innovative energy technologies.



## For Europe to become #1 in Renewable Energies, R&I has a crucial role to play

- Within the SET Plan, 10 priority Action lines have been identified addressing the **research** and **innovation challenges** and **needs** of the EU energy system.
- The first Action line is to be '*number one in renewable energy*' and the Commission will support the **development of the next generation of renewable technologies**, the improvement of their performance and lowering their cost. This applies to all renewable technologies, including **geothermal**.

## Geothermal energy has a great potential to:

- provide low carbon electricity and heat;
- diversify the energy mix;
- contribute to energy security.

**Yet penetration is too limited.**





# EC support to Geothermal Energy R&I

➤ **FP6 + FP7: ~49 M€;**

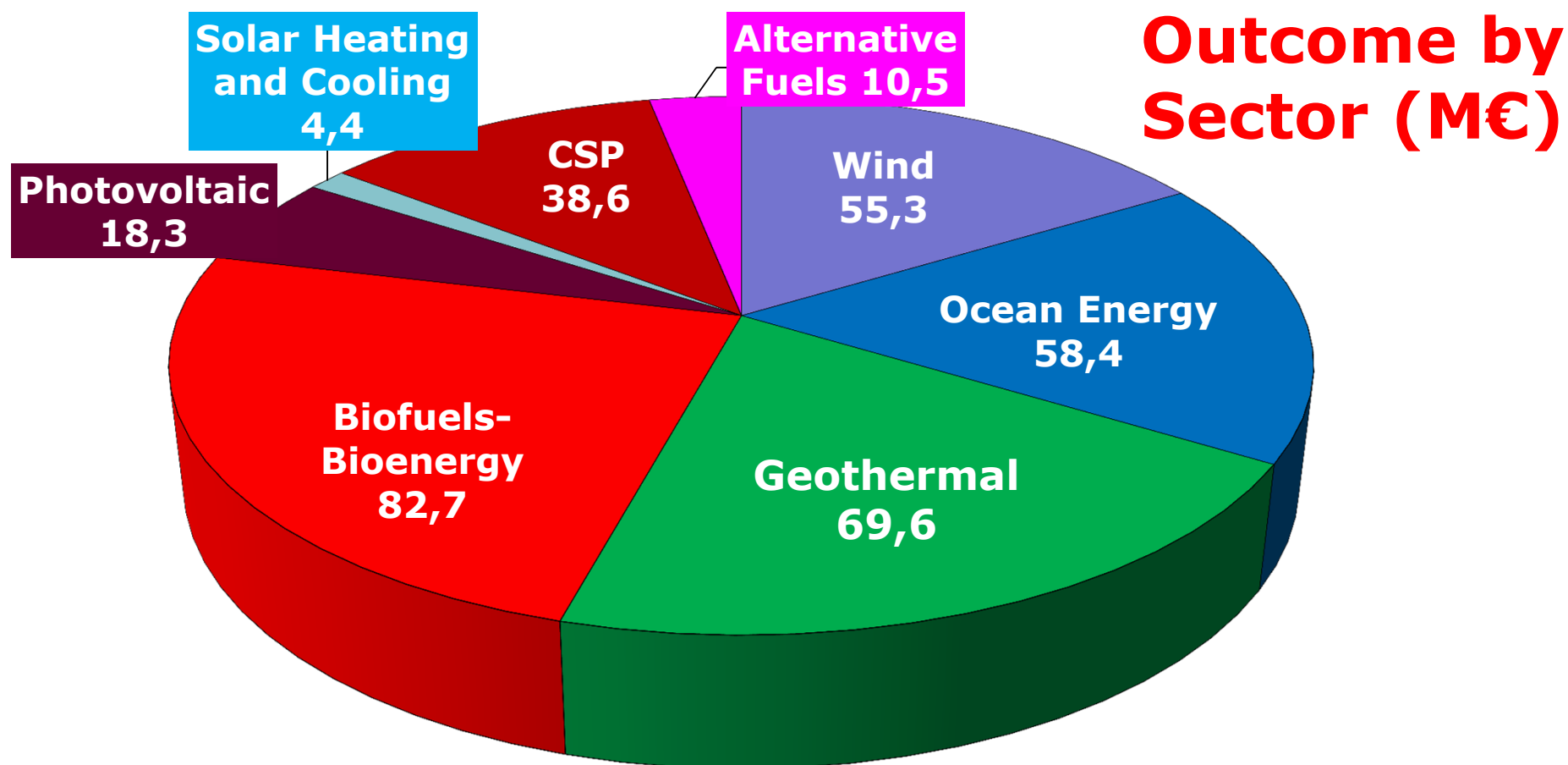
➤ **H2020:**

**2014-15 Work Programme: ~70 M€**

Geothermal Projects funded (M€)	
2014	24,1
2015	45,6
<b>Total</b>	<b>69,6</b>



## R&I in Renewables: Work Programme 2014-2015







# Addressed Challenges 2014-15

## **Research & Innovation Actions**

New drilling technologies and concepts to increase the number of economically viable geothermal resources:  
5 projects funded

## **Innovation Actions**

Improved models and innovative solutions to allow widespread deployment of deep and shallow geothermal sources:  
4 projects funded



## A successful Geothermal R&I proposal coordinated by HU (Horizon 2020 Call 2015)<sup>1</sup>



- The project '*Combined Heat, Power and Metal extraction from ultra-deep ore bodies*' aims to develop a disruptive technology solution that can help satisfy the European needs both for low-carbon energy and strategic metals in a single interlinked process.
- Considered highly innovative, this project is very ambitious in terms of its technological mix, is expected to advance the state-of-the-art and to make the technology more cost competitive.
- The project is coordinated by the University of Miskolc and has University of Szeged as one of its participants
- Requesting EU funding 4,2M€

<sup>1</sup> *Successfully evaluated but contract not yet in place*



# The way ahead

## Work Programme 2016-17

Increase the exploitation of geothermal energy sources, for electricity and heat production and for shallow and deep conditions to harness its full potential.

Demonstrate the cost-effectiveness, the viability and the efficiency of geothermal energy sources to produce electricity, heat or a combination of both.

## Geothermal R&I – moving forward

The Geothermal Energy community should build on its recent success. Increased cooperation amongst Member States and between all stakeholders is encouraged – a process which lies at the heart of our ambitions in the SET Plan.

***Thank you  
for your attention!***

<http://ec.europa.eu/programmes/horizon2020/>

[http://ec.europa.eu/priorities/energy-union/index\\_en.htm](http://ec.europa.eu/priorities/energy-union/index_en.htm)

<https://ec.europa.eu/energy/en/topics/technology-and-innovation/strategic-energy-technology-plan>

