

Future of Energy Systems on Local and Regional Level

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State of Renewable Energy Policy in Czechia

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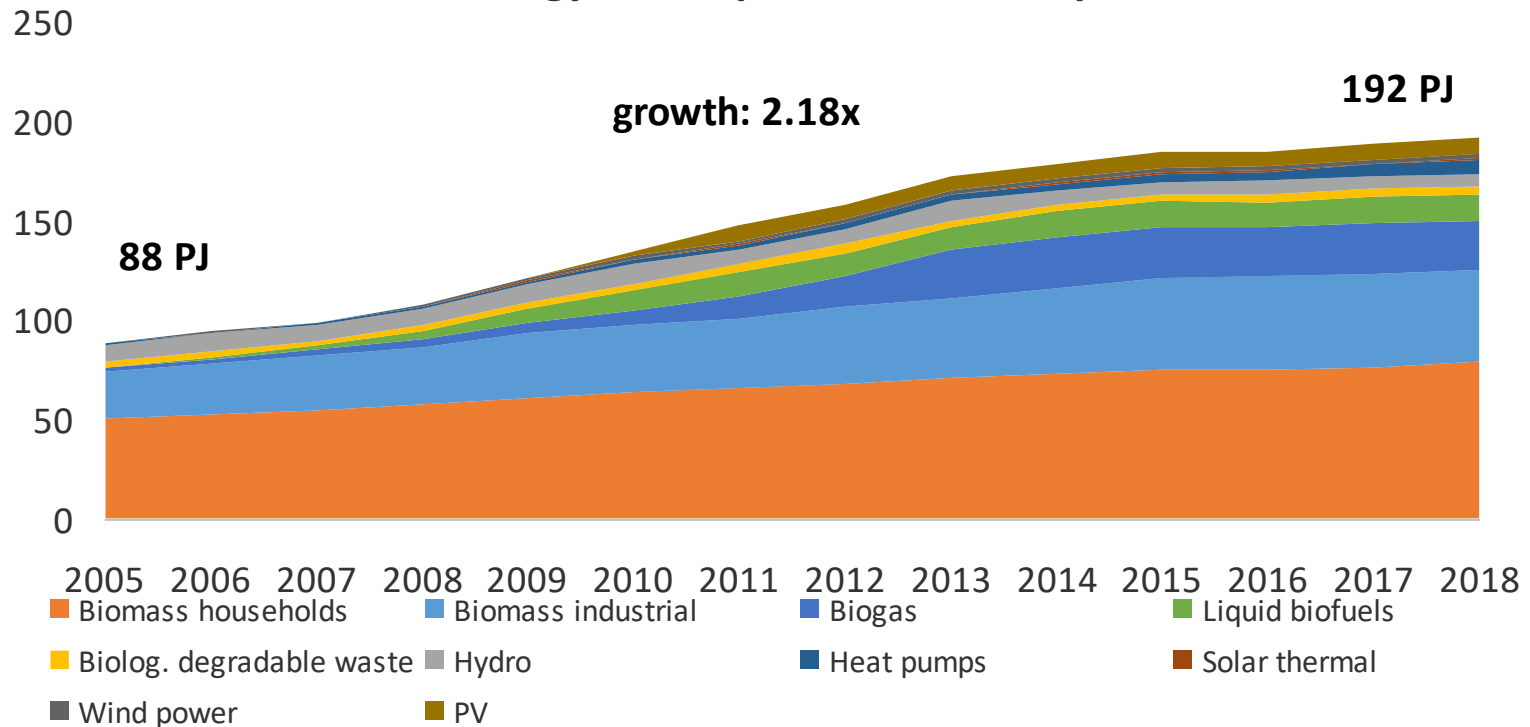


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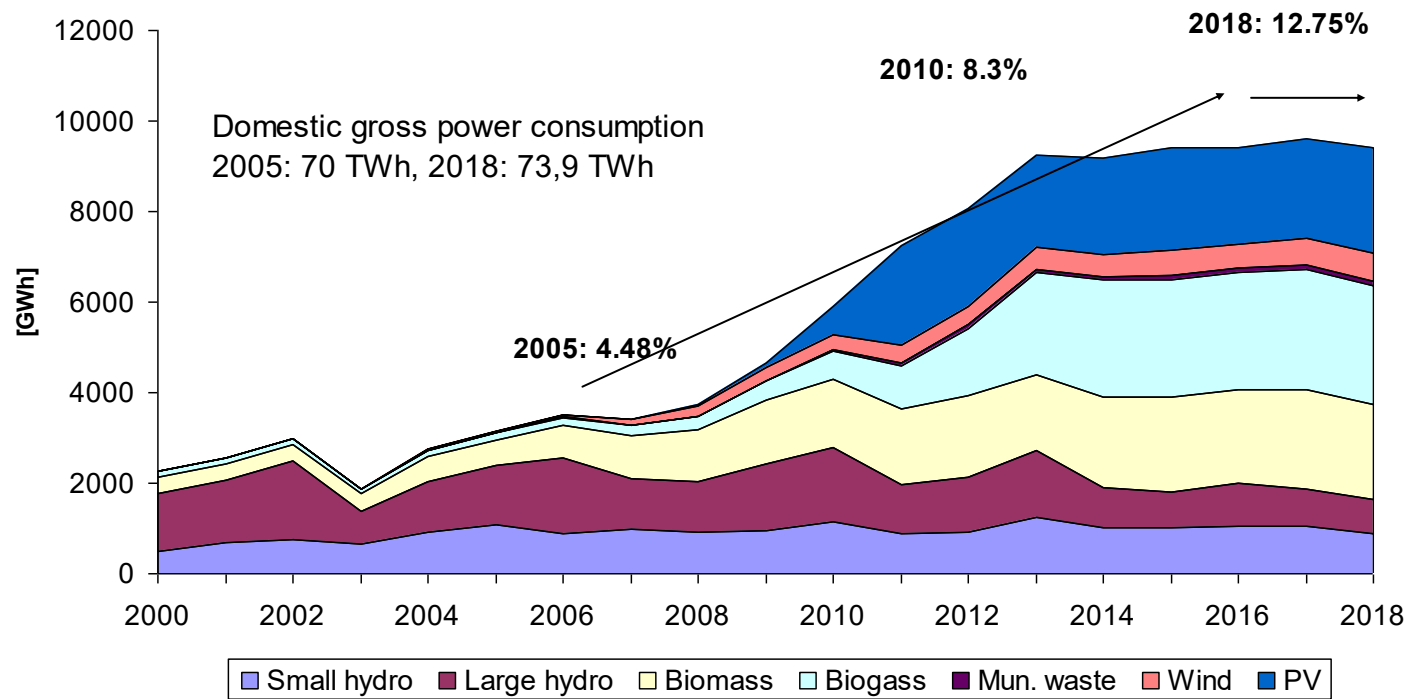
RES as primary energy sources

RES energy development, Czech Rep., PJ

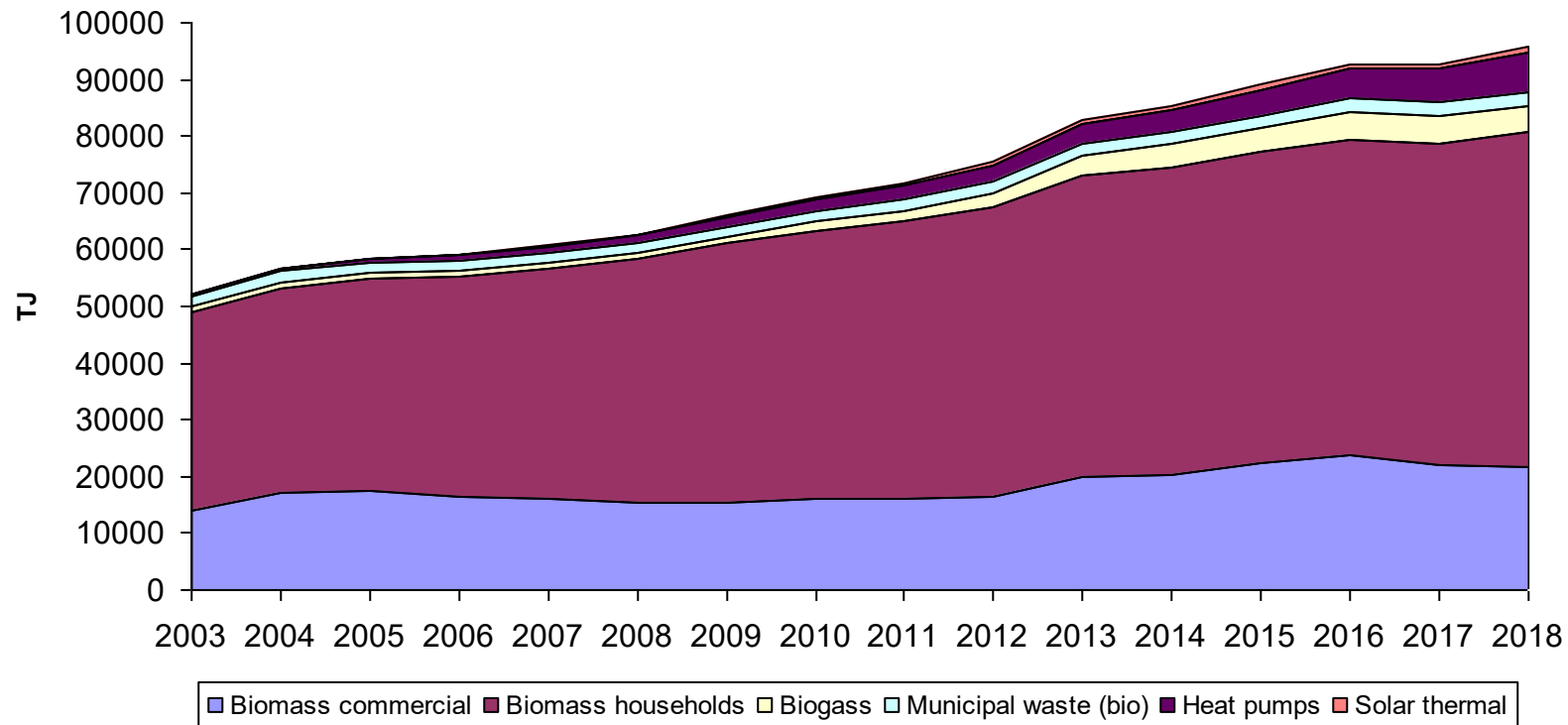


Biomass in all forms: 167 PJ / 87.1% (solid biomass 125 PJ / 65,2%)

RES for power generation

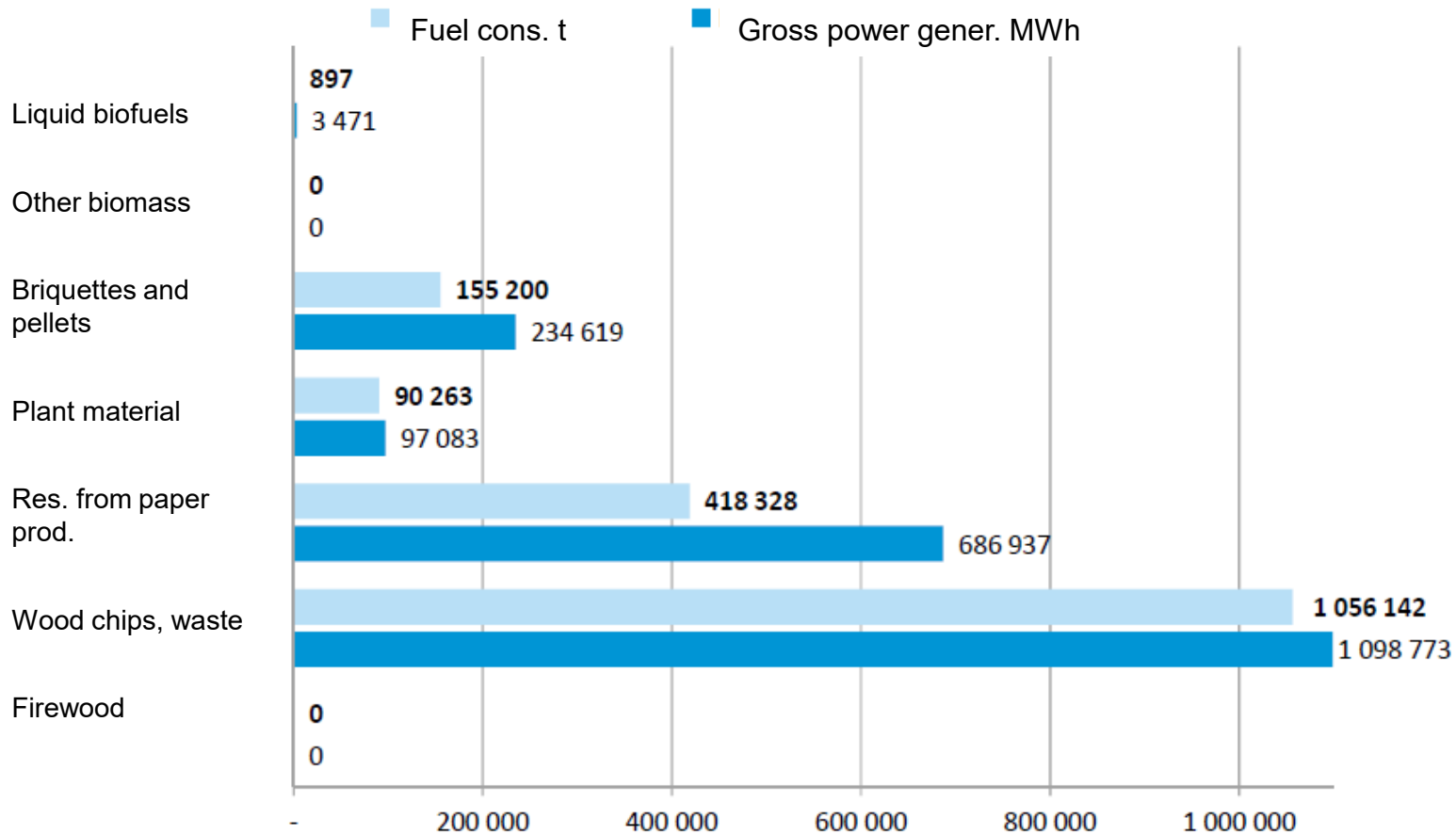


RES for heat production

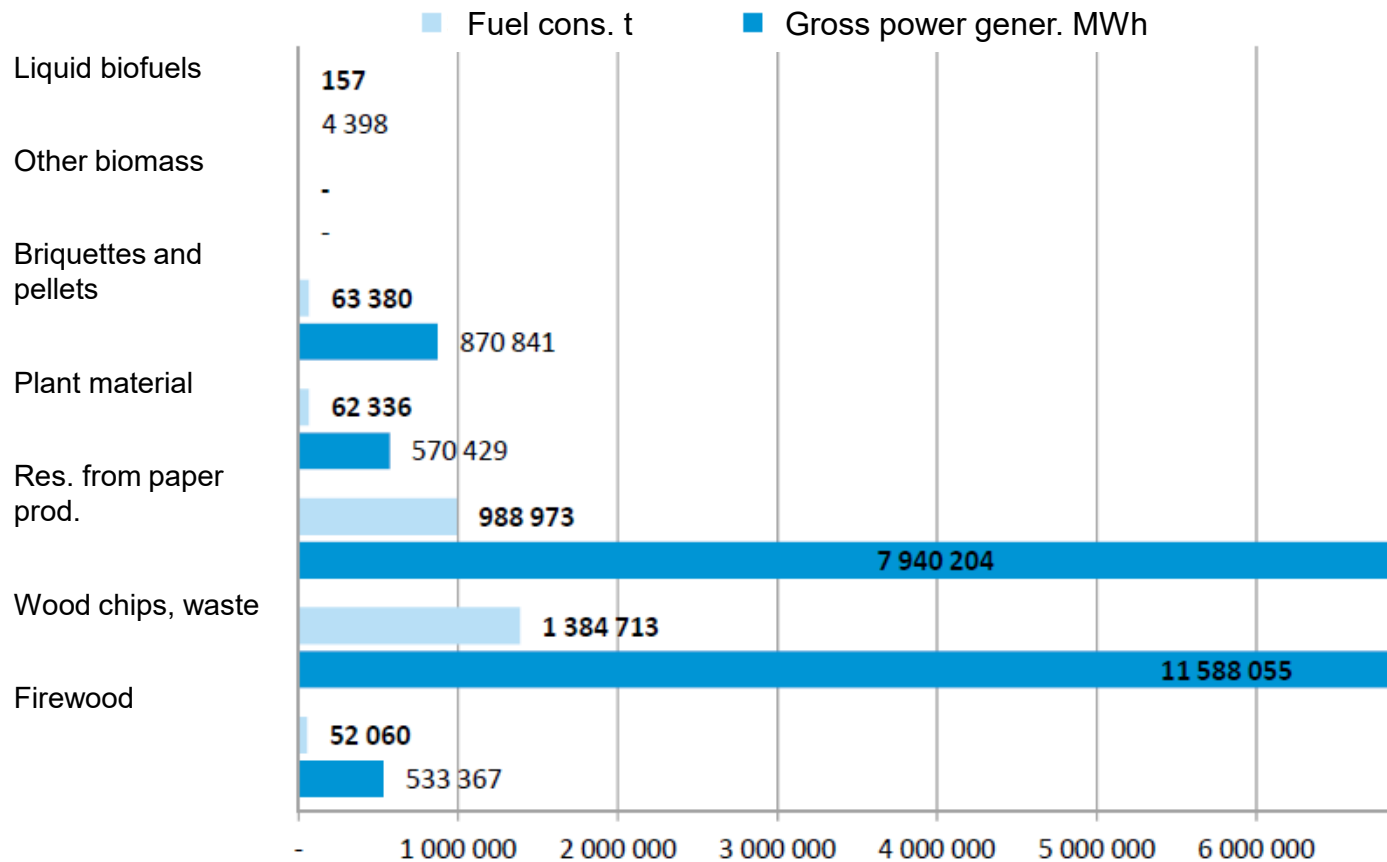


Firewood and residual wood – high majority of households consumption, (wood) pellets and briquettes in 2018: 203 th. t

Biomass – power generation



Biomass – heat production



RES – shares on final energy consumption

Year	RES shares on final energy consumption				Total %
	Power %	Transportation %	Heating and cooling %		
2010	7,52	5,12	14,11		10,52
2011	10,61	N.A.	15,4		10,95
2012	11,67	6,15	16,27		12,83
2013	12,78	6,34	17,65		13,89
2014	13,89	6,9	19,46		15,03
2015	14,07	6,45	19,71		15,02
2016	13,61	6,43	19,78		14,87
2017	13,65	6,58	19,65		14,76

Note: RES goal to 2020 – 13%

RES support - milestones

To understand present we have to understand what happened before

- **until 2002:** no systematic support, only investment subsidies from SFŽP and ČEA (limited amount, e.g. reconstruction of SH)
- **2002-2005:** start of operational RES support for power generation (but only at yearly base) – no real start of RES branch
- **2006-2012: Act 180/2005 Col.:** systematic support of RES for power generation (only), FIT and FIP scheme, based on regulated rate of return, reference projects, FIT and FIP differentiation according the categories, aim to reduce risk for the investors
 - cost transferred to the final consumers proportionally to power consumption
 - 2010 goal (8%) fulfilled, but
 - thanks to the gaps in legislation + slow reaction of politicians (year 2009) leads to the enormous and quick increase of PV installed power and cost of support

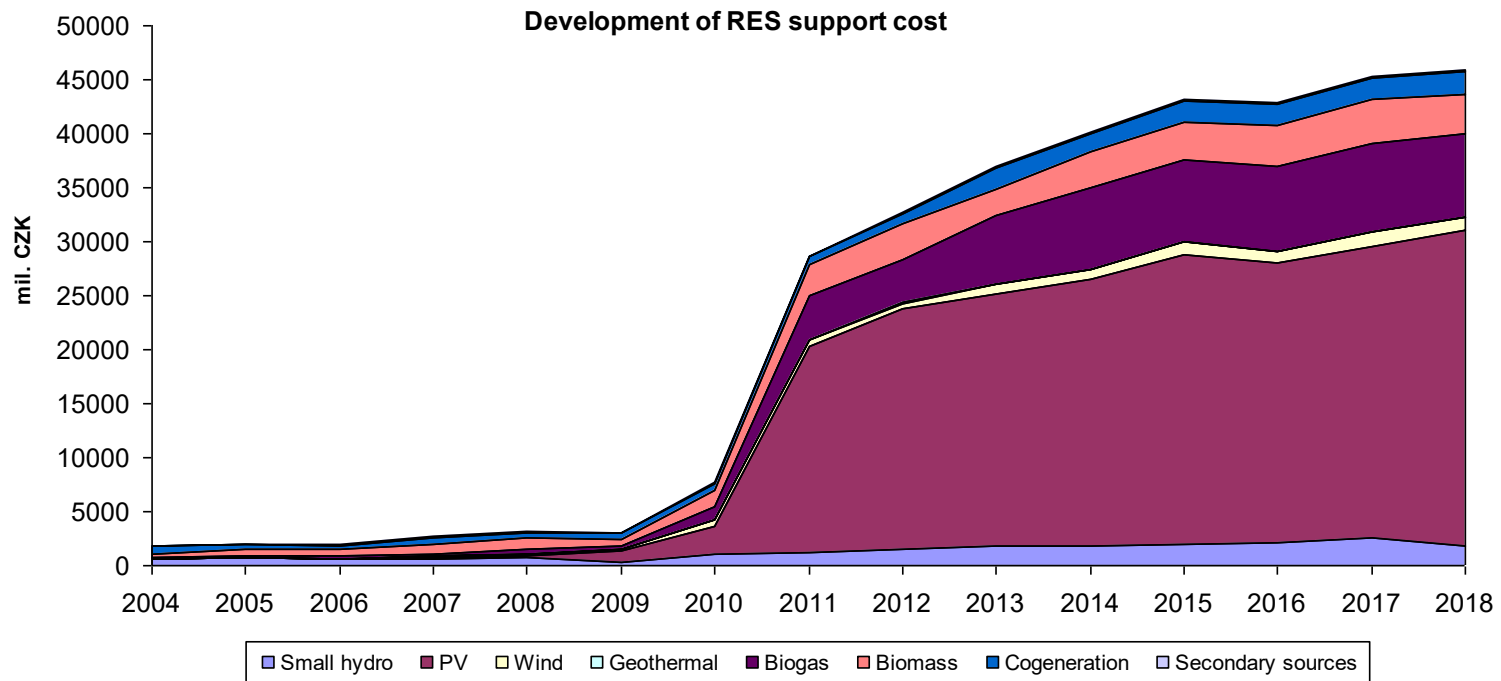
RES support - milestones

- **since 2011: changes in legislation to reduce cost impacts to the power consumers and to reduce rate of return from PV power plant**
 - *combined financing from the state budget and RES fee introduced*
 - *limit for RES fee: 495 CZK+VAT / MWh*
 - *retroactive tax on gross revenues of PV from 2009 and 2010*
 - *changes in attitude to RES support / policy*
- **since 2013: new logic of RES support**
 - *guarantee of payback (15 years) only – reduction of FIT and FIP, FIP for most plant at hourly base (relation to spot market)*
 - *roofs for installed power in individual RES categories – relation to NREAP*
 - *stagnation of RES development (esp. for power generation)*

RES support - milestones

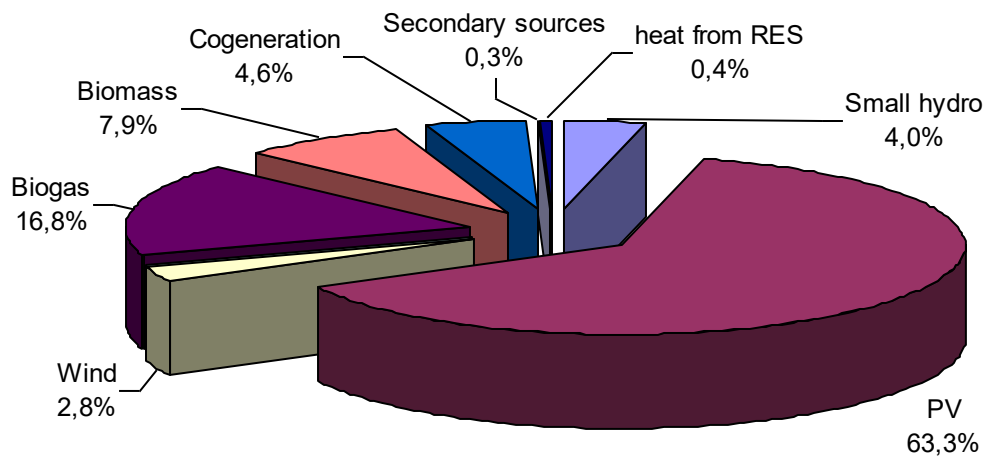
- **2018-2019:** preparation of NECP (+ RES goals to 2030), RES goal (acc. to the revised version of NECP, published at Nov. 2019: 22%)
- **since 2018:** audit of support of RES plant („overcompensation“) since 2006 after 10 years of operation, based on EU notification of support scheme, additional risk for the investors (reduction of support if IRR exceeds defined limit)
- **2018-2020:** preparation of new Energy act and RES support act

Cost of RES support



Cost of RES support - 2

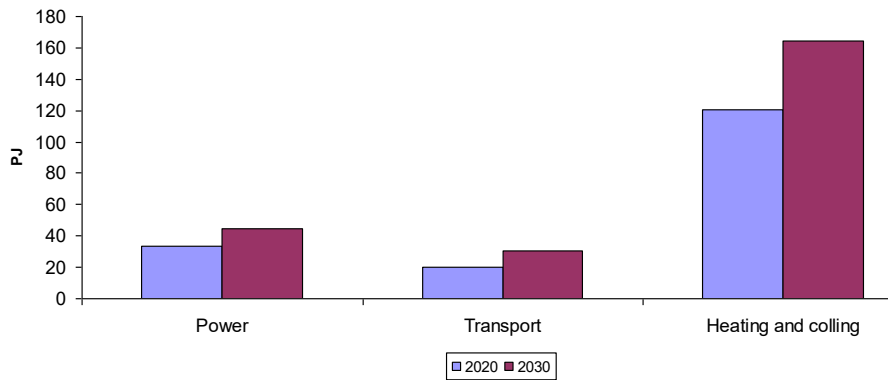
Share of RES categories on support cost, 2018



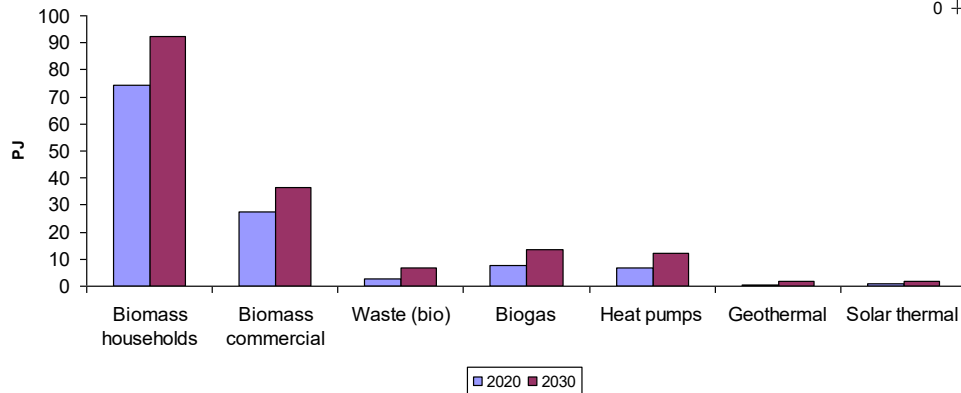
2018: 46.128 bil. CZK (1.8 bil. EUR)

NECP – expectation to 2030

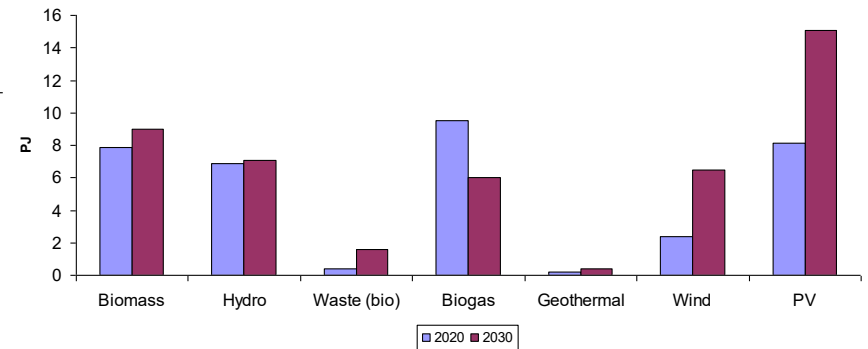
CZ NECP, RES on gross final consumption



CZ NECP, RES for heating and cooling



CZ NECP, RES for power generation



RES target 2030: 22%

increase from 174 PJ
(2020) to 239 PJ (2030)

RES – opened questions and sources of risk

- audit of overcompensation of existing RES power plants
- significant portion of existing RES PP will finish 20 year support period between 2027 and 2030: will be any support for continuation in operation ?
- biogas stations: problems with inputs (e.g. maize) and low energy efficiency – reconstruction to biomethane stations is discussed
- biomass is widely understood as important source, but:
 - sources of waste biomass from the industry are depleted
 - no systematic policy for planting energy crop on agriculture land
 - high threat of significant reduction of biomass (wood from forestry) availability for energy purposes thanks to bark beetle calamity
- logic of RES support since 2021: auctions, FIT/FIP for smaller PP, support of cogeneration and RES heat, etc

Forest tragedy – Czech Republic 2017-2019

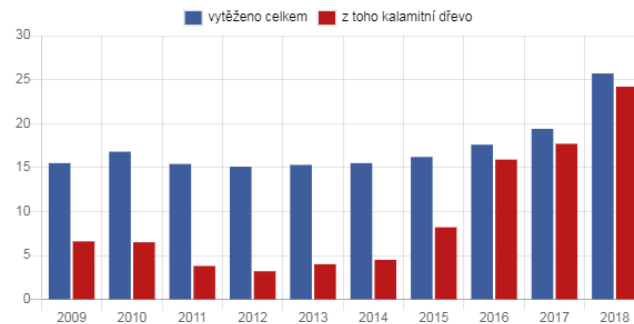


Forests: 2.7 mil. ha, coniferous 72%,
spruce > 50% of total forest area

Climate change (several very dry
and hot years), monoculture forests,
wind calamities and massive
invasion bark beetle
2019: 500 th. ha partly or fully
damaged



v mil. m³



Conclusions

RES policy / RES support in last two decades was changing significantly – high risk for the investors, stagnation of RES PP development

(Solid) biomass is taken as the option for coal substitution for part of coal cogeneration plant, but risk of biomass input deficiency

High RES support cost from previous decade is burden for new RES policy

Importance of effectivity issues in RES support scheme

Necessity to solve other (non RES support obstacles) – construction permissions, etc.

Source: CZSO

Thank you for your attention !

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