

VIETNAM RENEWABLE ENERGY POLICY



Electricity and Renewable Energy Authority
Hanoi, April 2022

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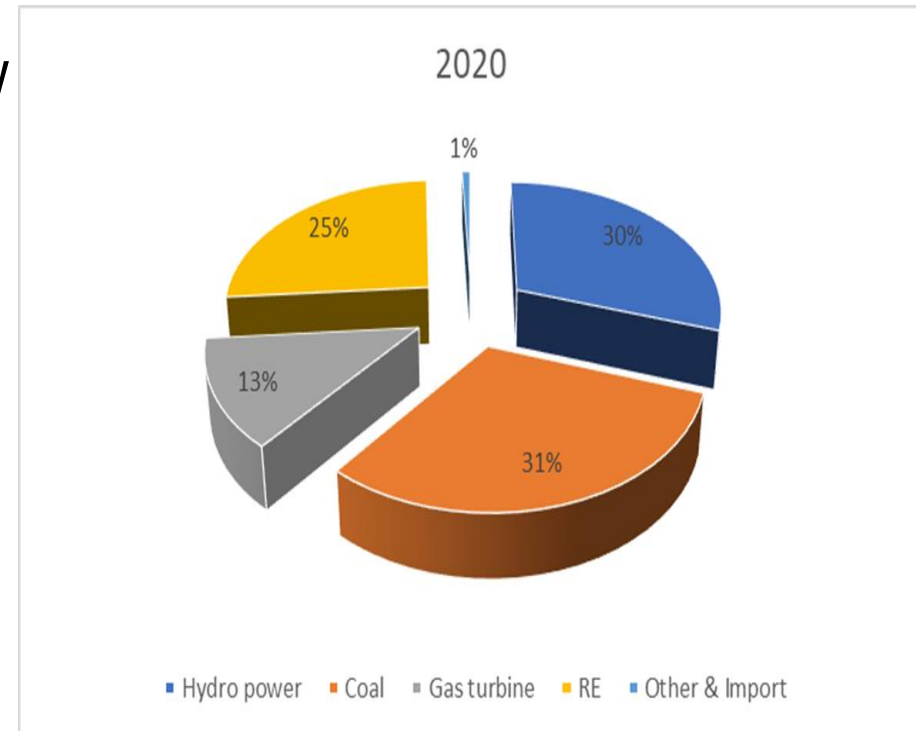
1. Renewable energy potential
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1. Renewable Energy Potential

<i>Resources</i>	<i>Potential</i>	<i>Installed capacity</i>
Solar power/điện MT	3,36 - 5,23 kWh/m ² /ngày	16,564 MW
Wind power onshore/offshore	27GW/600 GW	3,980 MW
Biomass/sinh khối	3000 MW	400 MW
Biogas/điện khí gas	58 MW	0.5 MW
Municipal wastes to energy	220 MW	75 MW
Geothermal energy	340 MW	0
Tidal energy	200 MW	0

2. Current situation

- Solar power projects: ~ 8,840 MW
- PV systems: ~ 7,664 MW
- Wind power: 3,980 MW
- Biomass: 400 MW
- Waste to energy: 9.43 MW



Total: ~ 21,000 MW, accounting for 27% of system installed capacity
RE generation in Oct. 2021: 11.3%

3. Policy direction for RE development

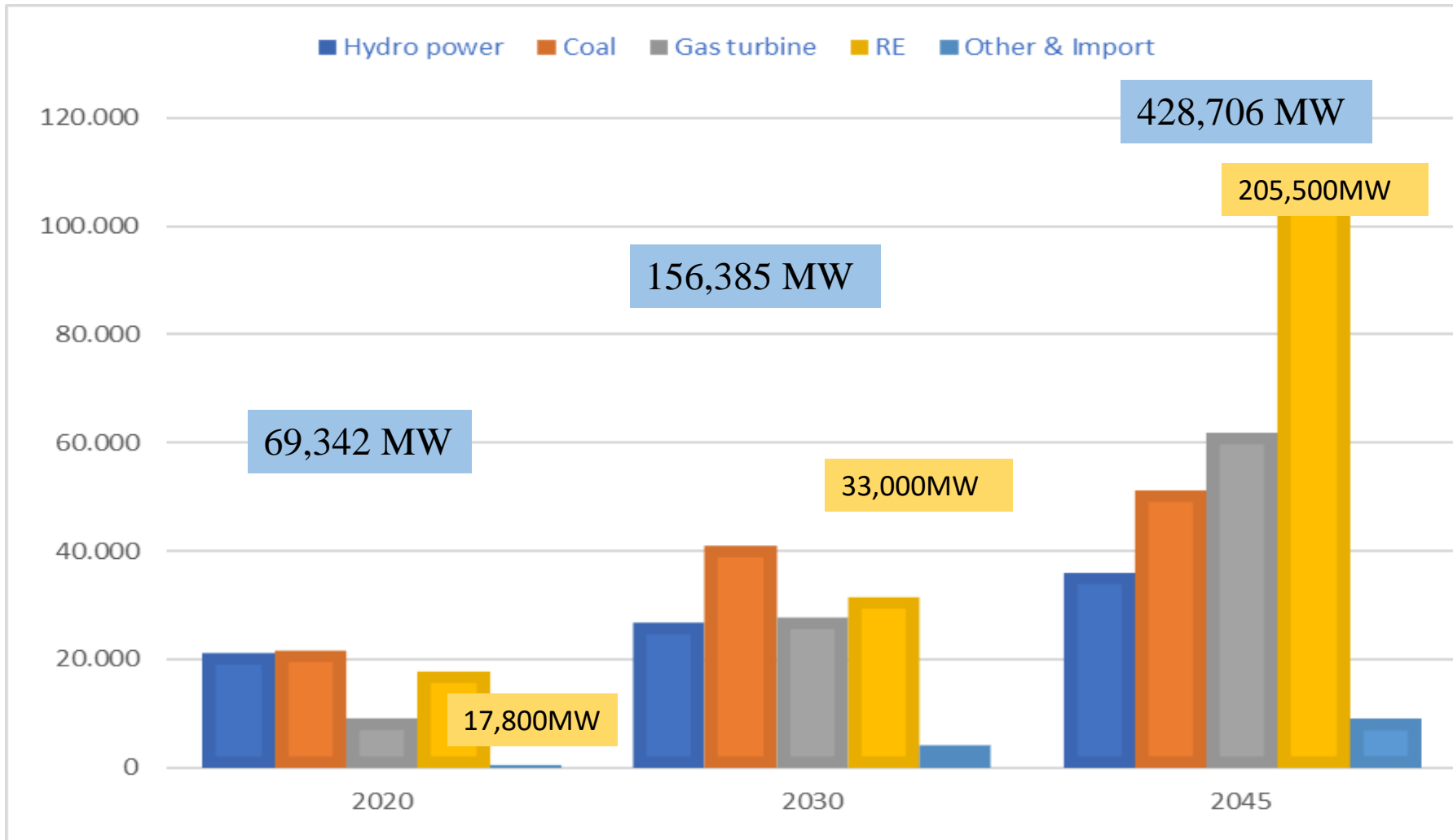
Decision 55 dated Feb 11, 2020

- Building breakthrough mechanisms and policy to strongly promote the development of RE sources in order to maximally fossil fuel energy sources
- Developing RE centers in potential regions
- Carrying out potential assessment and demonstration projects for developing of geothermal, waves, tidal and hydrogen energy sources
- Building the supporting mechanisms for development of offshore wind projects integrated with Marine Economic Development Strategy

Commitment of Government in COP 26, 2021

“Vietnam will reach net-zero carbon emission target by 2050”, “with international cooperation on finance, technology and capacity improvement”

Target for RE development in draft PDP VIII



Target for RE

Chỉ tiêu/năm	2025	2030	2035	2040	2045
Nhu cầu toàn quốc (Pmax)	61.357	93.343	128.791	162.904	189.917
Tổng công suất đặt toàn quốc	107.599	156.385	230.751	331.981	428.706
Tổng công suất đặt (không tính ĐMT áp mái, nguồn đồng phát)	<i>98.394</i>	<i>145.930</i>	<i>217.596</i>	<i>312.285</i>	<i>401.556</i>
Thủy điện (cả TĐ nhỏ)	26.795	28.946	33.654	34.414	35.139
Điện gió trên bờ, gần bờ	13.616	16.121	26.600	41.300	55.950
Điện gió offshore	-	7.000	18.000	40.500	66.500
Điện mặt trời quy mô lớn (MW)	8.736	8.736	25.034	47.893	75.987
Điện sinh khối và NLTT khác	980	1.230	3.090	4.960	5.210
Thủy điện tích năng và pin lưu trữ	-	2.450	7.650	17.850	29.250
Nhập khẩu	4.453	5.000	7.742	10.242	11.042
<i>ĐMT mái nhà</i>	<i>7.755</i>	<i>7.755</i>	<i>7.932</i>	<i>13.273</i>	<i>20.679</i>
<i>NMND cấp cho phụ tải riêng (đồng phát)</i>	<i>1.450</i>	<i>2.700</i>	<i>3.300</i>	<i>4.500</i>	<i>4.500</i>

Target for RE

Chỉ tiêu/năm	2025	2030	2035	2040	2045
Tổng nhu cầu	391.339	595.457	822.513	1.040.784	1.213.054
Tổng điện SX	391.339	595.457	822.513	1.040.784	1.213.054
Thủy điện (cả TĐ nhỏ)	94.937	100.471	110.123	111.026	112.112
Điện gió (offshore+onshore)	34.932	66.251	131.683	254.710	389.341
Điện mặt trời quy mô lớn (MW)	14.149	14.149	39.649	74.384	116.074
Điện sinh khối và NLTT khác	4.614	5.541	17.746	24.367	22.852
Thủy điện tích năng và pin lưu trữ	-	-459	-834	-1.265	-3.028
Thủy điện (cả TĐ nhỏ)	24,3%	16,9%	13,4%	10,7%	9,2%
Điện gió (offshore+onshore)	8,9%	11,1%	17,1%	26,4%	33,1%
Điện mặt trời quy mô lớn (MW)	3,6%	2,4%	5,8%	8,0%	10,4%
Điện sinh khối và NLTT khác	1,2%	0,9%	2,1%	2,2%	1,8%
Thủy điện tích năng và pin lưu trữ	0,0%	-0,1%	-0,1%	-0,1%	-0,3%

The proportion of electricity produced from RE will reach about **14%** in 2030, **25%** in 2030 and about 45% in 2045

4. Mechanism and solution for RE development

2011 - 2021

- Avoided cost for SHPs
- FIT mechanism for wind, solar farms, pv rooftops, biomass projects

2022 >

For RE projects

- Auction for wind, solar farm
- DPPAs for wind, solar projects
- Self-consumption models for PV rooftop
- Establishing legal framework for offshore wind power projects development

Transmission and connection grids solutions

- Development of system storages
- Establishing legal framework for private investment in the transmission line
- Modernizing dispatching, operation, communication, forecasting and system control

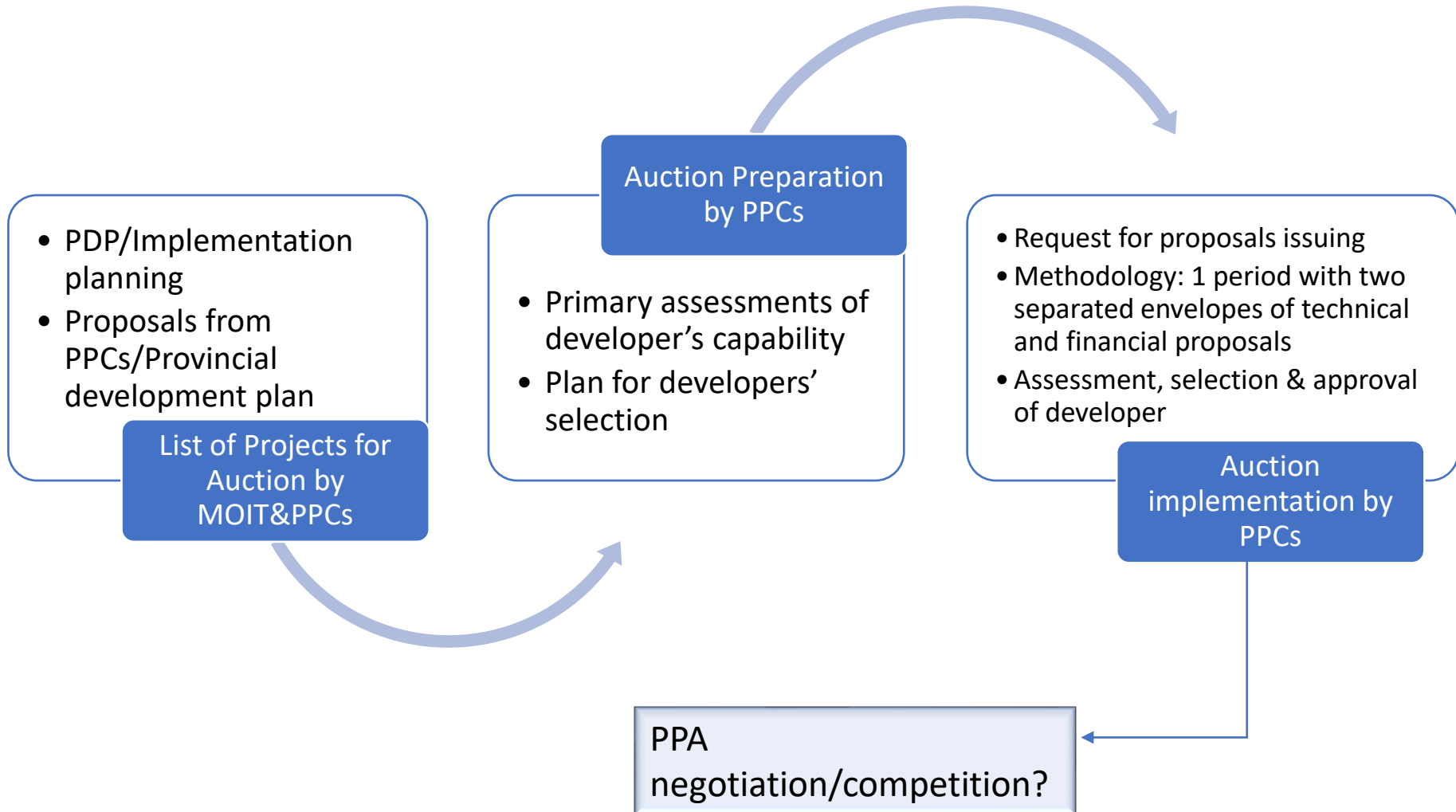
5. Auction design for wind and solar projects

Legal framework:

- Law on Investment issued in 2020;
- Decree 31/2021 on regulation for implementation of Law on investment
- Law on Investment under the PPP model issued in 2020;
- Decree 35/2021 on regulation for implementation of Law on PPPs
- Law on Bidding 2014; Decree 25/2020 on regulation for developers/investors' selection
- Electricity Law 2004, 2012

5. Auction design

Auction design at study (for non PPPs)



5. Policy for RE development

Auction design at study (cont.)

Primary requirements for developers:

- Being legal and financial independence from related authority and other parties of project contract;...
- Having qualified experience and capability in RE project development: financial capability, equity contribution, RE project development

Principle for the bid winner's selection:

- Eligible of bidding document
- Qualified experience and capability
- Qualified technical proposal
- Offering the lowest cap of price

5. Auction design

Outstanding issues are under consideration

- Procedure for PPC's development planning/on transmission line aspect
- Criteria required for PPC's proposal on projects and volume for a period of time
- Criteria for developer's capability
- Criteria for technical proposal assessment: technology, equipment and project's efficiency, use of land, project's implementation plan, connection solution...
- Criteria for financial proposal assessment: cap of price? Or cost of assessment?
- Guarantee for project development
- PPA design
- Others: adjustment of project's COD, changing of developers...

Thank you for your attention