

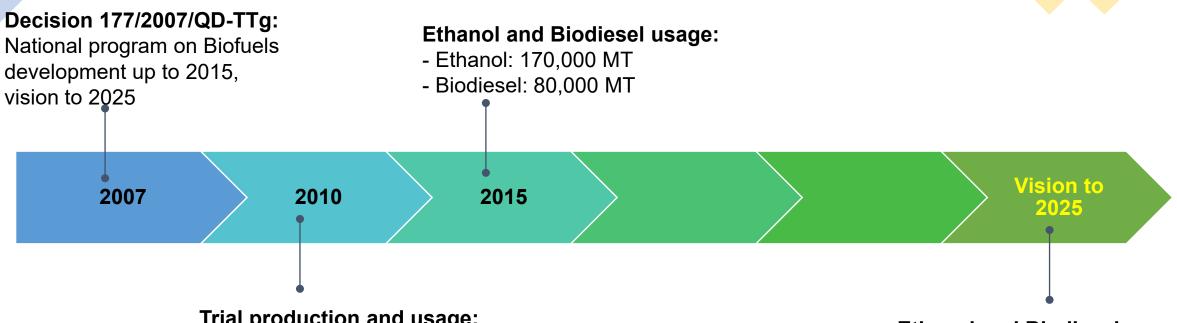
Implementation of Gasohols from Petrolimex's perspective

Hanoi, April 2024

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- 2. Petrolimex's blending capabilities and distribution progress
- 3. Petrolimex's gasohols annual sales
- 4. Suggestions

1. Gasohols implementation roadmap and mandates



Trial production and usage:

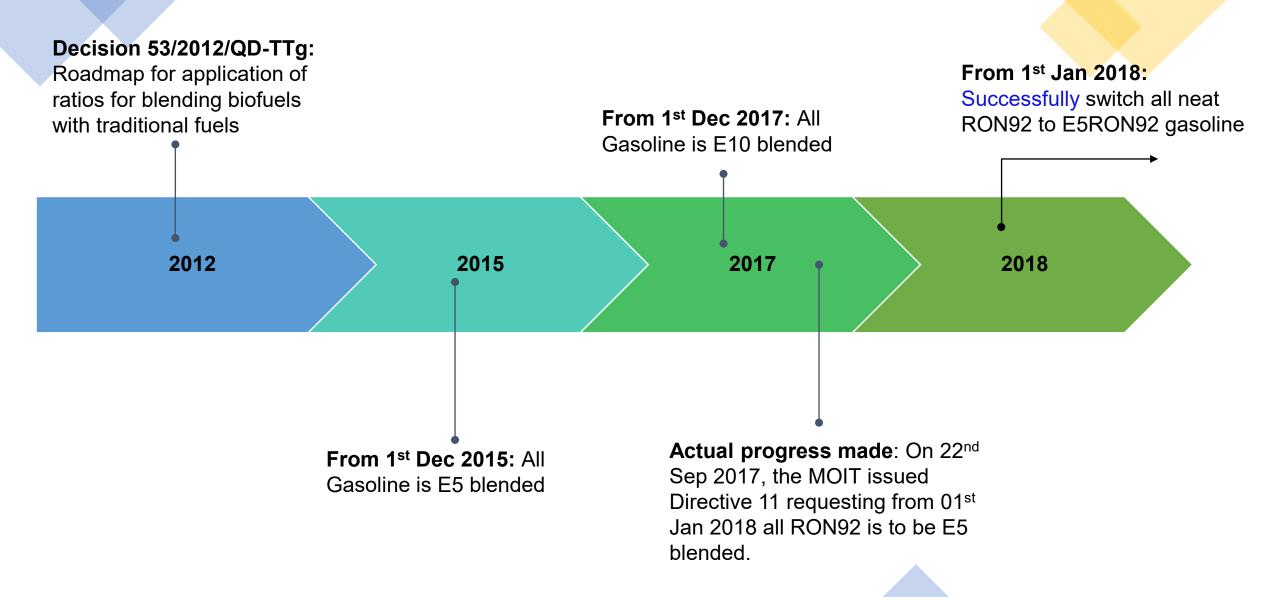
- E5*: 100,000 MT

B5: 50,000 MT

Ethanol and Biodiesel usage:

- Ethanol: 1,200,000 MT - Biodiesel: 600,000 MT

1. Gasohols implementation roadmap and mandates (cont.)



1. Gasohols implementation roadmap and mandates (cont.)

After COP26, the Government took immediate actions:

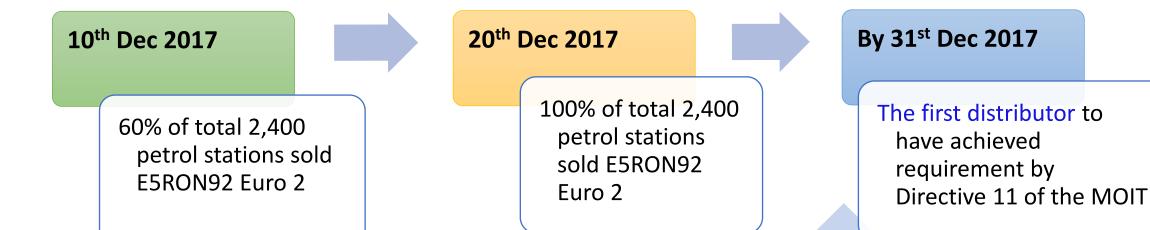
#	Mandates	About	Biofuels Target
1	Decision No. 876/QĐ-TTg by the Prime Minister dated 22nd July 2022	Approving the action program for transition to green energy	From 2022 – 2030: All Gasoline (RON92, RON95 and RON97) is E5 blended
2	Decision No. 882/QĐ-TTg by the Prime Minister dated 22nd July 2022	Approving the National Action Plan on Green Growth for 2022 – 2030 period	Source for new and cleaner energy/fuels
3	Decision No. 888/QĐ-TTg by the Prime Minister dated 25th July 2022	Approval for scheme setting out tasks and solutions for implementation of outcomes of the 26th Conference of the Parties	By 2030: All Gasoline (RON92, RON95 and RON97) is E5 blended



The implementation progress is being stretched out from the initial roadmap, E5 for all type of Gasoline by 2030.

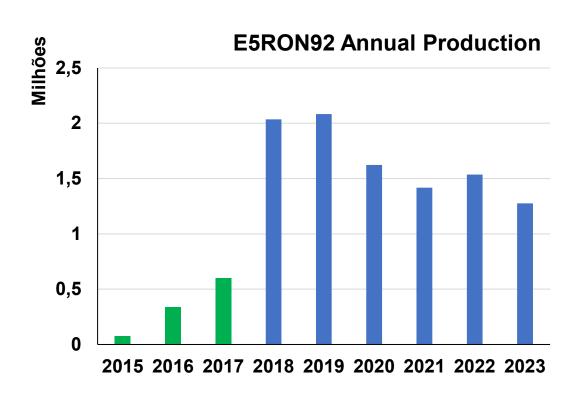
2. Petrolimex's blending capabilities and distribution progress

- ❖ Abide by Decision 53 of the Government, from 2015 2017 Petrolimex established E5 Gasoline blending facility (total capacity: 2.5 3 million m³/year)
 - Intank blending: at 03 locations
 - Inline blending: at 07 locations
- Source of Ethanol: Domestic supplier and import from USA/Korea/Japan...
- Petrolimex's E5RON92 distribution timeline:



3. Petrolimex's gasohols annual sales

#	Year	Annual Production (m3)
1	2015	76,375
2	2016	338,115
3	2017	597,000
4	2018	2,035,500
5	2019	2,082,500
6	2020	1,623,610
7	2021	1,417,250
8	2022	1,535,500
9	2023	1,276,100
	Total production	10,981,950



The average Ethanol blend is 4.76% Vol

4. Suggestions

#	Issue	Reasoning	Suggestions
1	Customers prefer neat Gasoline over E5RON92	 Concern that E5RON92 is incompatible for engine and vehicles' parts E5 Gasoline produce lower heat of combustion compared to neat Gasoline 	Enterprise to demonstrate better promotion campaign for Ethanol blended Gasoline, enhancing the benefits of using such fuels
2	Sales of E5RON92 continues to decline	 Customers prefer neat Gasoline over E5RON92 Ethanol blended mandate for all Gasoline is not yet implemented 	 Should impose strict measures to ensure all petroleum distributor fulfill the E5 and E10 Gasoline roadmap Making E5 mandate for all Gasoline, including RON92, RON95 and RON97
3	E5 is insignificantly cheaper than neat Gasoline	 - High E5 operating cost (blending, testing, storage, transportation) contribute to high E5 price - Insubstantial incentives given to E5 Gasoline end-users 	Better financial incentives so price differential is good enough to attract customers toward using E5 Gasoline