

<b>Title of the measure:</b>	<b>LV 23 Investments to Produce Energy (Biogas) from Biomass of Agriculture Origin (2014-2020 EU Funds programming period)</b>
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### **General description**

In 2014-2020 EU Funds' programming period the financial support will be provided within the framework of the Measure 06 "Farm and business development by supporting the non-agriculture activities", priority 5C, Activity 6.4.1 of the national Rural Development Programme [1, pages 268, 289-290], financially supported by European Agricultural Fund for Rural Development (EAFRD). Responsible ministry - the Ministry of Agriculture, the responsible institution supervising implementation – state administration institution Rural Support Service (*Lauku atbalsta dienests*), [2]).

According to the Article 13 of the Commission Delegate Regulation (EU) No 807/2014 of 11 March 2014, it is stated by [1] that

- beneficiary biogas plant shall operate in combined heat-power (CHP) mode and shall utilise at least 70% of the produced heat (to provide own production or shall sold to other business entities),
- at least 70% of raw products for fermentation should be provided by the by-products of beneficiaries farm, like manure, waste and residue of food production and processing, not utilizable for food production.

The total amount of public allocations is planned 16 MEUR [1,3], of which share of EARD – 10.880 MEUR. The maximum total eligible costs for one beneficiary within all programming period is stated 2 MEUR. The financial support is stated 20% or 40%, the higher support will be granted to micro and small farms. Thus it is envisaged at least 45.7 million investments (public + private) (p.512 of [1]).

### **Impact Evaluation**

If assume the same limit of financial support, applied in 2007-2013 programming period, namely, the total eligible costs per 1 kW<sub>el</sub> of installed electrical capacity should not exceed 4269 EUR / 1 kW<sub>el</sub> for capacity up to 500 kW<sub>el</sub> [5], it could be supported at least 45'700'000 EUR/ 4269 EUR/1 kW<sub>el</sub> = ~ 10.7 new MW<sub>el</sub> capacity. Thus, assuming 85% load, the amount of produced new RES electricity might reach ~ 80 GWh (0.287 PJ) in 2023. The Latvia national standard emission factor for consumed electricity – 0.109 tons CO<sub>2</sub>/1 MWh<sub>el</sub> [6] – might be applied to calculate CO<sub>2</sub> savings resulting from new renewable electricity. Thus it might be calculated ~ 8.7 thsd tons of CO<sub>2</sub> savings (gross<sup>1</sup>) resulting from new renewable biogas electricity in 2023. Assuming electric/thermal power ratio 1:1 and 70% use of produced heat, it might be anticipated around 56 GWh (0.2 PJ) new renewable heat in end-use sector (*evaluation done by IPE*).

In 2014 the national gross final consumption of electricity was ~ 7 TWh (~ 25 PJ) [7]. Thus, the contribution of described measure in the development of Latvia power sector might be substantial, around 1%.

In 2014 the final energy consumption of Latvia agriculture & forestry sector were 6.137 PJ [7]. Thus, the renewable heat energy produced by biogas plants might contributed significantly in the final consumption of the agriculture sector.

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<sup>1</sup> the CO<sub>2</sub> emissions from fossil energy consumption due to production of raw materials and biogas are not taken into account.

## Historical data

In 2007-2013 EU Funds' programming period the financial support were provided within the framework of the sub-measure 312/311(3) "Production of energy from biomass which is of agricultural or forestry origin" of the national Rural Development Programme [4].

In 2015, 49 biogas plants, utilising agriculture sector raw materials, with total electric capacity of ~50 MW<sub>e</sub> had been under operation in Latvia – see the MURE database Tertiary sector measure TER-LV18 "Investments to Produce Energy from Biomass of Agriculture and Forestry Origin (2007-2013 EU Funds programming period)"

## References

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2. Rural Support Service, <http://www.lad.gov.lv/en/about-us/general-information/>
3. Factsheet on 2014-2020 Rural Development Programme for Latvia, [http://ec.europa.eu/agriculture/rural-development-2014-2020/country-files/lv/factsheet\\_en.pdf](http://ec.europa.eu/agriculture/rural-development-2014-2020/country-files/lv/factsheet_en.pdf)
4. Rural Development Programme for Latvia 2007-2013 (*Latvijas Lauku Attīstības Programma 2007-2013.gadam*), pages 234-237, in Latvian, [https://www.zm.gov.lv/public/files/CMS\\_Static\\_Page\\_Doc/00/00/00/37/56/LAP2007-2013\\_14\\_versija\\_iesniegta\\_EK.pdf](https://www.zm.gov.lv/public/files/CMS_Static_Page_Doc/00/00/00/37/56/LAP2007-2013_14_versija_iesniegta_EK.pdf)
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6. Covenant of Mayors Committed to local sustainable energy. „Technical Annex to the SEAP template instruction document: the emission factors”, page 2, [http://www.eumayors.eu/IMG/pdf/technical\\_annex\\_en.pdf](http://www.eumayors.eu/IMG/pdf/technical_annex_en.pdf)
7. Central Statistical Bureau of Latvia. Statistics database ENG02 „Energy Balance” , [http://data.csb.gov.lv/pxweb/en/vide/vide\\_ikgad\\_energetika/?tablelist=true&rxid=cdbc978c-22b0-416a-aacc-aa650d3e2ce0](http://data.csb.gov.lv/pxweb/en/vide/vide_ikgad_energetika/?tablelist=true&rxid=cdbc978c-22b0-416a-aacc-aa650d3e2ce0)