

# Waste-to-energy projects in Latvia



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## Overview

*Waste-to-energy* is a process whereby solid municipal waste is incinerated to produce energy that can be further used in power grids or heating systems. While the incineration of waste in recovery plants is a way of reducing landfilled waste and recovering energy therefrom, use of such installations in waste management and district heating systems is controversial from a sustainability point of view. The diversion of waste from landfills for incineration enables energy recovery from non-recyclable waste and reduction of methane emissions from landfills, but there is a risk that incineration may compete with recycling and the transition to a circular economy. Furthermore, despite strict quality requirements, incineration still causes pollution both from hazardous ash and emissions from the chimney, including greenhouse gas (GHG) emissions. When fuel from waste (FfW) mainly produced from fossil materials (e.g. various plastic materials) is used, such plants may have higher GHG emissions than most other forms of energy generation<sup>1</sup>. While incinerators can potentially reduce GHG emissions in the waste sector (compared to open-air incineration and landfills without the capture and use of methane), GHG emissions from this process are inevitable.<sup>2</sup> The efficiency of incineration depends on the applied technologies and the energy recovery capacity. However, installations of superior quality are very expensive and may be unprofitable, so a considerable and stable volume of waste is needed to incinerate waste efficiently.<sup>3</sup> This resource must be continuously supplied even in case of purposeful reduction of locally sourceable waste.

At the level of European Union, there is a gradual transition away from waste incineration and instead more sustainable alternatives to waste management and energy production are promoted. This is due to concerns about their compliance with the broader environmental objectives of the EU, based on the European Green Deal and the resultant Circular Economy Action Plan.<sup>4</sup> Currently there are two incinerator plants installed in Latvia - one FfW recovery plant in [Ventspils](#) and one biomass cogeneration plant in [Jelgava](#). Jelgava plant has also a permit to co-incinerate waste, but now, almost without exceptions, it operates with woodchips without using any waste<sup>5</sup>. Besides that FfW is used as an alternative fuel at the cement plant of [SIA SCHWENK Latvia in Brocēni](#)<sup>6</sup>.

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<sup>1</sup> Tangri, 2023. <https://doi.org/10.1371/journal.pclm.0000100>

<sup>2</sup> United Nations Environment Programme (UNEP), 2019  
<http://wedocs.unep.org/bitstream/handle/20.500.11822/28413/WTEfull.pdf?sequence=1&isAllowed=y>

<sup>3</sup> Zaļā brīvība, 2024. [Pozīcija: atkritumu sadedzināšana enerģijas ieguvei](#) (*Position Statement: Waste-to-Energy*)

<sup>4</sup> [How the European Green Deal impacts waste management | Enhesa](#)

<sup>5</sup> [Gren Latvijā - projekti](#) (*Gren in Latvia - Projects*)

The cement industry has high quality requirements for FfWs and Latvian waste processors have not made substantial investments in the processing and preparation of such materials, so the plant currently imports most of the waste<sup>7</sup>. In this respect there is a high potential for improvement of the local waste processing and the separation of biological material to reduce the volume of the of the waste currently being imported. In the future, two different waste-to-energy plants are planned in Pierīga Region ([Ropaži](#) and [Salaspils](#) regional communities), and plans for construction of the incinerator in [Daugavpils](#) have been suspended in 2018 due to public objections. The plans for the new waste recovery projects have already given rise to strong opposition from the local population as well as from various organisations. As stated during the meeting of the Saeima Economic, Agricultural, Environmental and Regional Policy Committee Committee of 11 June 2024<sup>8</sup>, there is a high risk that, if the new plant projects are implemented, the amount of waste produced in Latvia will not be sufficient and it will have to be imported, as well as there is a possibility that the heat produced will not be transferred to the heating network, because there may be excess heat.

## Waste recovery and its use in heating

### European Union legislation and practices

Ambitious waste management and recycling objectives are outlined in the planning documents of the European Union (EU). By 2025, the target is to recycle 55% of generated waste, and by 2030 - to increase this rate to 60%, while ensuring that no more than 10% of generated municipal waste is landfilled<sup>9</sup>. The European Parliament and the Council strengthened those ambitions at the beginning of 2024 by agreeing to reduce volume of packaging waste further and eliminate non-recyclable packaging<sup>10</sup> that currently accounts for around 13% of total packaging in Latvia<sup>11</sup>. Waste recovery does not correspond to the categories of public investment identified in the EU taxonomy for sustainable activities<sup>12</sup>, thus underlining that it does not correspond to the EU climate and environment goals.

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<sup>6</sup> SCHWENK Latvija, n.d., [Sustainable manufacturing](#)

<sup>7</sup> SCHWENK Latvija, 13 June 2022, [We share our experience in the use of alternative fuels in cement production in the discussion on waste recovery plants](#)

<sup>8</sup> Meeting of the Committee for National Economy, Agrarian, Environmental and Regional Policy of the 14<sup>th</sup> Saeima of the Republic of Latvia of 11 June 2024 <https://titania.saeima.lv/LIVS/SaeimasNotikumi.nsf/webSNbyDate?OpenView&count=1000&restrictToCategory=11.06.2024>.

<sup>9</sup> On the National Waste Management Plan 2021-2028 <https://likumi.lv/ta/id/320476-par-atkritumu-apsaimniekosanas-valsts-planu-20212028-gadam>.

<sup>10</sup> Press release of the Council of the European Union, 2024 <https://www.consilium.europa.eu/press/press-releases/2024/03/04/packaging-council-and-parliament-strike-a-deal-to-make-packaging-more-sustainable-and-reduce-packaging-waste-in-the-eu/>.

<sup>11</sup> *Latvijas Zālais Punkts*, n.d. <https://www.zalais.lv/aktuali/jaunumi/tresa-dala-latvijas-veikalos-pieejama-iepakojuma-nav-kvalitativi-parstradajams>

<sup>12</sup> European Commission — EU taxonomy for sustainable activities, n.d., [https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities\\_en](https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en)

As a practical example of moving away from waste incineration, the EU principle of *do no significant harm* (or *DNSH*) does not support investment in the construction of new waste incineration plants<sup>13</sup>. Commission Notice *Technical guidance on the application of 'do no significant harm' under the Recovery and Resilience Facility Regulation* explicitly states that increase of waste-to-energy capacity jeopardizes transition to circular economy as it would likely *'lead to a significant increase in the generation, incineration or disposal of waste [...]'*<sup>14</sup>. European Commission in the report *The role of waste-to-energy in the circular economy* stressed the need for Member States to reduce waste-to-energy capacity as it may act as an infrastructural barrier to the achievement of higher recycling rates, and states that previous experience in some Member States shows the risk of such project becoming stranded assets is real<sup>15</sup>. European financial institutions are increasingly choosing to support less GHG-emitting alternatives by excluding waste-to-energy from their sustainability agenda. The financial support from the European Regional Development Fund and the Cohesion Fund is not available to investments aimed at increasing the capacity of waste incineration plants (with the exception of the outermost regions)<sup>16</sup>. Limited financing for waste-to-energy is only available from the European Investment Bank (based on the DNSH principle).<sup>17</sup>

The recommendations of the European Commission (EC) to Member States with low waste-to-energy capacities include recommendation to these Member States (thus also Latvia) to prioritise the development of separate collection schemes and recycling infrastructure rather than incineration. The diversion of waste from landfills should be accompanied by an increase in recycling capacity and the disposal of biodegradable waste to landfills should be reduced as a matter of urgency in order to reduce methane emissions. According to EC, combined energy recovery and material recycling can be an effective management option if carried out through anaerobic digestion rather than through waste to energy<sup>18</sup>. The Commission states: *'[...] assessing the need for additional waste-to-energy capacity [...], Member States should [...] assess the following factors:*

- *the impact of existing and proposed separate collection obligations and recycling targets on the availability of feedstock to sustain the operation of new incineration plants [...];*
- *the available capacity for co-incineration in combustion plants and in cement and lime kilns [...];*
- *planned or existing capacity in neighbouring countries.'*<sup>19</sup>

<sup>13</sup> Zero Waste Europe, 2021, <https://zerowasteurope.eu/2021/05/wte-incineration-no-place-sustainability-agenda/>

<sup>14</sup> Commission Notice, 2021, [eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021XC0218\(01\)&from=EN](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021XC0218(01)&from=EN)

<sup>15</sup> Communication from the Commission, 2017, [COM\\_2017\\_0034\\_FIN.ENG.xhtml.1\\_EN\\_ACT\\_part1\\_v13.docx](http://COM_2017_0034_FIN.ENG.xhtml.1_EN_ACT_part1_v13.docx) (europa.eu)

<sup>16</sup> See 13.

<sup>17</sup> European Investment Bank, 2020. [EIB Group Climate Bank Roadmap 2021-2025](http://EIB_Group_Climate_Bank_Roadmap_2021-2025)

<sup>18</sup> See 15.

<sup>19</sup> See 15.

This type of in-depth and proper analysis of alternatives has not been carried out in the National Waste Management Plan 2021-2028<sup>20</sup>, which outlines the need for additional waste-to-energy capacities in Latvia. Thus, there is a risk that Latvia's need for energy recovery plants is exaggerated and Latvia will lose the opportunity to improve and transform both waste management and heat supply systems efficiently and sustainably. In addition, Latvia, together with other EU countries, is actively lobbying the European Commission to strengthen the role of sustainable district heating in achieving the EU climate goals. In a joint call to the European Commission, countries stress the need for Europe to pay more attention to greening district heating and to be more ambitious in the transition to heat from renewable energy sources such as solar energy, bioenergy, geothermal energy, etc., and to use technologies such as large scale heat pumps, solar thermal collectors and residual heating.<sup>21</sup> Waste-to-energy is not included in this call as a sustainable source for heat supply.

### Situation in Latvia

Until now, two incinerators have been installed in Latvia - one in Ventspils and one in Jelgava (where different types of fuel may be used), and waste is also used as an alternative fuel in the cement plant of *SIA SCHWENK Latvija*. The construction of two different waste recovery plants in Pierīga Region is currently planned, while the construction plans of the incinerator in Daugavpils have been suspended.<sup>22</sup> The capacity of existing and planned equipment is detailed in [Table 1](#).

#### Ventspils

The project *Construction of waste fuel recovery facilities in Ventspils, Talsu Street 69* implemented with the support of the European Union Cohesion Fund, has just completed the construction phase and is awaiting approval for the start of production. The project provided for an installation of a plant with a total recovery capacity of 15 300 tonnes of FfW per year, incl. 11 000 tonnes per year for waste generated in Ventspils Waste Management Region (WMR) and 4 300 tonnes per year for waste generated by adjacent WMRs. This project is co-financed by the European Cohesion Fund covering more than 50% of the cost (EUR 9 184 249 out of a total EUR 18 150 000)<sup>23</sup>. The target group of the project is the public waste disposal service provider, the operator of the municipal waste disposal landfill *Pentulji*, the municipal company *SIA Ventspils labiekārtošanas kombināts*<sup>24</sup>.

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<sup>20</sup> See 9.

<sup>21</sup> Ministry of Climate and Energy, 2024. [the-role-of-the-heating-and-cooling-sector-in-2040\\_14.05.2024.pdf](#) ([kem.gov.lv](#))

<sup>22</sup> *ibid.*

<sup>23</sup> <https://www.esfondi.lv/istenotie-projekti/5-2-1-3-18-a-001>



The tender for the construction of the installation was awarded to *SIA MONUM* (with a contract price of EUR 17 500 000 excluding VAT) the offer of which was considered to be the economically most advantageous<sup>25</sup>. The site is located in the northern part of Ventspils, in the area (approx. 7300 m<sup>2</sup>) adjacent to the boiler house managed by *PSIA Ventspils siltums*. It is intended that 6 kV power supply, water supply and sewerage connections, gates and weights of the existing boiler house, as well as part of roads and squares will be used by the plant. The nominal intended production capacity of the recovery plant is 8.5 MW<sup>26</sup>. As stated during the public consultation on the project on 4 July, this incinerator will accept only preprocessed FfW, as the local sorting capacity is insufficient<sup>27</sup>. The recovery of FfW will result in production of 31.7 thousand MWh/year of thermal energy and 10.6 thousand MWh/year of electric energy<sup>28</sup> for sale.

The project implementers stated as one of justifications for the construction of the facility that *'in view of the EU policy for the waste management sector, as part of the circular economy concept, the construction of waste-to-energy facilities is an integral part of the improvement of the system'*<sup>29</sup>. In the light of the EU's efforts to put an end to the support for incineration and waste-to-energy, such reasoning is questionable. Furthermore, smaller incinerators are less efficient<sup>30</sup>. As stated by the project implementer during the public consultation, the small size of the project is unique for Europe and has therefore implementation thereof was challenging and time consuming<sup>31</sup>.



Ventspils recovery plant during construction process. Courtesy of PSIA Ventspils labiekārtošanas kombināts

<sup>24</sup> *ibid.*

<sup>25</sup> *Ventspils labiekārtošanas kombināts*, n.d. [Projekts NAIK \(vlk.lv\)](http://projekts.naik.lv)

<sup>26</sup> *ibid.*

<sup>27</sup> <https://www.ventspils.lv/pazinojums-par-sabiedrisko-apsriesanu-a-kategorijas-piesarnojosas-darbibas-atlaujas-sanemsanai-no-atkritumiem-ieguta-kurinama-kogeneracijas-stacijai-ventspili/>

<sup>28</sup> <https://www.esfondi.lv/istenotie-projekti/5-2-1-3-18-a-001>

<sup>29</sup> *ibid.*

<sup>30</sup> *Equanimator Ltd.*, 2023. [Debunking Efficient Recovery - Full Report \[EN\].docx](#)

<sup>31</sup> See 27.

## Jelgava

Since 2023, a biomass cogeneration plant of *Gren Latvija* formerly *SIA Fortum Latvia* operates in Jelgava, Rupniecibas Street. This plant has permission to incinerate up to 30,000 tonnes FfW, i.e. waste can be used as a fuel mixed with chips up to 35%. The thermal capacity of the plant is 45 MW<sup>32</sup>. This facility can produce up to 460 GWh of energy and covers up to 95% of the city's district heating load, serving 16,000 households or 420 residential buildings, as well as 173 legal entities<sup>33</sup>. Co-incineration of FfW is to be commenced during the heating season of 2025/2026, currently woodchips are used as primary fuel (with small quantities of natural gas). In case the quantities of FfW will be insufficient to produce the specified amount of energy, it is planned to increase the amount of biomass and eventually completely replace the FfW with biomass<sup>34</sup>. The specific supplier of FfW equipment has not been chosen yet, but the Environmental Impact Assessment (EIA) report states that *'the potential supplier of FfW could be, for example, SIA Jelgavas komunālie pakalpojumi sourcing the waste from sorting station Brakšķi'*, and specifies that only waste that is no longer suitable for recycling will be used<sup>35</sup>. This plant is likely to operate for the most part as a biomass incineration plant.

## Pierīga Region

Two large-scale waste-to-energy plants (140 000-200 000 tonnes of waste/year) are currently planned in the vicinity of Riga. As the availability of EU public co-financing for the construction of waste recovery facilities is decreasing, the investors of both plants are from the private sector. The primary objective of the recovery facilities would be the reduction of waste disposal, the generation and supply of electricity to the grid, and supply of thermal energy to Riga. According to the project implementers, the plants would also contribute to the achievement of climate change objectives. Although, taking into account both the European circular economy guidelines and the fact that EU countries (including Latvia) are encouraged by EU to focus on greening of central heating systems through renewable sources<sup>36</sup>, stations of this scale are not a straightforward solution neither for waste management nor heating. As of 1 January 1 2026, permits for the use of any fossil fuel will no longer be issued in Riga, and from 1 January 2031, it will not be possible to install new heating system equipment using fossil fuel<sup>37</sup>.

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<sup>32</sup> ["Gren" biomasas koģenerācijas stacija - Tūrisms Jelgavā un Jelgavas novadā](#) (*Gren* biomass cogeneration plant - tourism in Jelgava and Jelgava Townland)

<sup>33</sup> [Biomasas koģenerācijas stacija Jelgavā gatava apkures sezonai](#) (Biomass cogeneration plant in Jelgava is ready for heating season)

<sup>34</sup> *SIA Ekodoma*, 2023. Ietekmes uz vidi novērtējums (Environmental Impact Assessment) [Ietekmes-uz-vidi-novertejuma-zinojums\\_2023\\_redigets\\_MAY\\_23.pdf](#)

<sup>35</sup> *ibid.*

<sup>36</sup> See 21.

<sup>37</sup> Riga City Council, 2023, <https://www.riga.lv/lv/jaunie-apkures-noteikumi-riga>

### *Ropaži Townland*

Funding from international private investors will be attracted for Ropaži waste-to-energy plant. This means that funding for the development and operation of the site will be ensured without financial support from the state or public authorities. The first plant for which the EIA has recently been completed is being developed by *CleanR Group* company *Vides resursu centrs* has rated thermal output of 60,4 MW and intake of 143 000 tonnes of waste per year <sup>38</sup>. It is expected that the cogeneration unit will be able to produce net (sold) heat of about 404 GWh per year and net (sold) electricity of about 126 GWh per year. The heat generated at the plant, according to the implementers of the project, could cover the demand of approximately 100 000 inhabitants. Within the scope of the proposed activity, the initiators do not exclude the possibility of partial or total replacement of FfW with biomass (woodchips). The plant is intended to be constructed approximately 600 m from the nearest residential houses in Dreiliņi<sup>39</sup>. This plant has undergone the environmental impact assessment process, and there is a very high level of activity of the local population linked to this project, both in terms of raising objections in public consultation and by creating two public initiatives against this incinerator, each collecting more than 10,000 signatures<sup>40,41</sup>. The issue of permits for the building of this plant was examined at the meeting of the Saeima Mandate, Ethics and Submissions Committee of 22 May <sup>42</sup>, as well as at the meeting of Environmental, Climate and Energy Subcommittee of Saeima Economic, Agricultural, Environmental and Regional Policy Committee on 11 <sup>43</sup>, during which the situation with the incineration plants in Latvia and their potential in general were discussed. Further discussions are scheduled this September.

### *Salaspils Townland*

The construction plans of the second station in Acone, Salaspils Townland, were announced by project implementers and investors *Gren Latvija* (formerly *SIA Fortum*) in May 2024<sup>44</sup>. Their intended waste-to-energy plant would start operating in 2029 and would use 150 to 200 thousand tonnes of waste. The planned thermal capacity of the regeneration station is 50-70 MW, while the electric power – 15-20 MW. It is expected to provide energy to around 40 000 households. The company plans to invest EUR 200 000 000<sup>45</sup>.

<sup>38</sup> [Reģenerācijas jaudas potenciāls \(irenergija.lv\)](#) (Potential recovery capacity)

<sup>39</sup> State Environmental Bureau, 2024. Atzinums par ietekmes uz vidi ziņojumu (Opinion regarding the Environmental Impact Assessment Report) [download \(vpvb.gov.lv\)](#)

<sup>40</sup> [PAR PIERĪGU BEZ ATKRITUMU DEDZINĀŠANAS! | ManaBalss.lv - līdzdalības platforma](#) (FOR PIERĪGA REGION WITHOUT INCINERATION OF WASTE, participatory platform ManaBalss.lv)

<sup>41</sup> [PAR DROŠU ATTĀLUMU NO ATKRITUMU DEDZINĀŠANAS RŪPNĪCĀM | ManaBalss.lv - līdzdalības platforma](#) (ON SAFE DISTANCE FROM WASTE INCINERATION PLANTS, participatory platform ManaBalss.lv)

<sup>42</sup> Meeting of Mandate, Ethics and Submissions Committee of 14th Saeima of the Republic of Latvia of 22 May 2024 <https://titania.saeima.lv/LIVS/SaeimasNotikumi.nsf/webSNbyDate?OpenView&count=1000&restrictToCategory=22.05.2024>

<sup>43</sup> Meeting of the Economic, Agricultural, Environmental and Regional Policy Committee of the 14<sup>th</sup> Saeima of the Republic of Latvia, 11 June 2024

<https://titania.saeima.lv/LIVS/SaeimasNotikumi.nsf/webSNbyDate?OpenView&count=1000&restrictToCategory=11.06.2024>

<sup>44</sup> «Gren» Latvijā investēs 200 miljonus eiro reģenerācijas stacijā siltuma ražošanai no atkritumiem / Raksts (Gren to invest EUR 200 million in waste-to-energy plant in Latvia)

<sup>45</sup> *Gren Latvija* [Jaunie projekti](#) (New Projects)



Acone waste-to-energy plant for energy generation will use sorted non-hazardous municipal and industrial waste unsuitable for recycling that would otherwise be deposited at landfill. It will also employ wood waste and low quality biomass<sup>46</sup>. The authors of this intent also plan to transfer heat to Riga and to use the waste treatment centre of *SIA Getlini*, which would be located in the vicinity of the area<sup>47</sup>. As this project is currently at an early stage, the available information on its estimates is very limited.

### Daugavpils

The National Waste Management Plan 2021-2028 stipulates that in Latgale region a waste recovery plant capacity up to 20 thousand tons per year (10 MW) could be built in Daugavpils<sup>48</sup>. In 2018, a project for the construction of waste recovery plant was launched in Daugavpils<sup>49</sup>, but it was discontinued due to public objections<sup>50</sup>. In 2020, the company that currently is called *SIA Gren Latvija* showed an interest in setting up a new recovery facility for energy production in Daugavpils, but the company has not made a specific offer<sup>51</sup>. The Latgale WMR project states that one of the priorities is, first, to specialize on quality assurance for the delivery of FfW to *SCHWENK Latvija* cement plant and, second, to diversify the production FfW by quality classes – for transferring the highest class FfWs to *SCHWENK Latvija* for energy recovery, and to examine possibilities for the construction of waste-to-energy plant in Latgale AAR for recovery of energy from lower class FfW regeneration<sup>52</sup>.

### SCHWENK Latvija Cement Plant

*SIA SCHWENK Latvija*, manufacturer of cement and other construction materials, covers 98% of its energy needs using alternative fuels – FfWs, including textile waste<sup>53</sup>. Unlike waste incineration, ash generated from FfW during cement production is used as a raw material for clinker production, making it a waste-free process. Thus, cement production is not equal to waste incineration - it does not generate hazardous waste and ash that require special management<sup>54</sup>. *SCHWENK Latvija* uses approximately 160 000 - 200 000 tons of alternative fuel per year, two thirds of which are imported, i. e. from the total amount of the necessary alternative fuel only 40 000 – 50 000 tons are produced in Latvia<sup>55</sup>. This poses a number of challenges, including for packaging management and logistics.

Local suppliers are not able to provide the necessary volume, but the company prefers local material<sup>56</sup>.

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<sup>46</sup> *ibid.*

<sup>47</sup> See 44.

<sup>48</sup> See 9.

<sup>49</sup> *SIA Geo Consultants*, 2018. [Daugavpils-NAIK-IVN-Zinojums-1red \(aadso.lv\)](#)

<sup>50</sup> See 9.

<sup>51</sup> [Latgales Laiks](#)

<sup>52</sup> *SIA Geo Consultants*, 2023. [Latgales RAAP Projekts 26.03.2023.](#)

<sup>53</sup> See 7.

<sup>54</sup> See 6.

<sup>55</sup> See 7.

As stated by representatives of the Ministry of Smart Administration and Regional Development at the meeting of 11 May, the imported FfW could also be produced in Latvia.<sup>57</sup> Strengthening local capacity to produce quality FfW would reduce need for additional waste recovery capacities.

Table 1. Overview of existing and planned installations using waste as fuel

Plant	Type of plant	Progress	Heat production capacity for consumption, MW	Capacity, tonnes of waste	Population served	Investments
Ventspils	Waste-to-energy	Issue of Category A permit; incineration of FfW not yet started	8.5	15,300	Unknown	61.23% EU co-financing, 38.77% credit and company funds
Jelgava	Biomass cogeneration plant	Incineration of FfW during eating season of 2025/2026; incineration of FfW not commenced yet	45	30 000 (i. e., 35% of total fuel)	1600 households	<i>SIA Gren Latvija</i> (formerly <i>SIA Fortum</i> )
Ropaži	Waste-to-energy	EIA completed; plant installation not started yet	60.4	143,000	100,000 inhabitants	<i>SIA Vides Resurscentrs</i>
Acone	Waste-to-energy	Plans for the project have been made public, EIA not started; construction of the plant not yet started	50-70	150,000 – 200 000	40000 households	<i>SIA Gren Latvija</i> (formerly <i>SIA Fortum</i> )
Brocēni	Cement plant	Operated	N.A.	160 000 – 200 000 of which 40 000 – 50 000 produced in Latvia	N.A.	EU co-financing, <i>SIA SCHWENK Latvija</i>

<sup>56</sup> Zaļā brīvība, 2023. [https://www.zalabriviba.lv/wp-content/uploads/Majsaimniecibu\\_tekstila\\_skirosana\\_un\\_ilgtspejiga\\_izmantosana\\_Latvija-2.pdf](https://www.zalabriviba.lv/wp-content/uploads/Majsaimniecibu_tekstila_skirosana_un_ilgtspejiga_izmantosana_Latvija-2.pdf)

<sup>57</sup> Meeting of the Environmental, Climate and Energy Subcommittee of Economic, Agricultural, Environmental and Regional Policy Committee of 14th Saeima of the Republic of Latvia, 11 June, [recording](#) (00:34:00)

## Existing risks

**Diminishing financial and political support for waste-to-energy projects.** The European Commission has clearly indicated departure from waste incineration practices. Instead, the support is granted to moves towards more sustainable waste management (e.g., by eliminating non-recyclable materials) and sustainable heat production methods (e.g., by using heat pumps and solar thermal collectors) that would further reduce the role of incinerators in future. Mandatory monitoring of municipal waste incineration emissions will be introduced in the EU Emissions Trading System (EU ETS) by the end of 2024<sup>58</sup>. In the first half of 2023, important amendments were adopted to reform the EU ETS<sup>59</sup>, the European Parliament approved the inclusion of the municipal waste incineration sector in the EU ETS from 2026, setting a price for fossil CO<sub>2</sub> emissions from the waste incineration plants in order to ensure a level playing field with national ETS systems already covering this sector (e.g., Sweden, Denmark) and to stimulate further decarbonisation<sup>60</sup>. This means that the operating costs of recovery facilities in the future will increase, which may lead to higher heating and electricity prices for municipalities using these facilities. Such changes may entail financial losses for operators of those facilities.

**Hindering of waste recycling.** Incinerators can become a serious obstacle in achieving higher recycling rates<sup>61</sup>. As waste recycling improves, waste-to-energy plants are at risk of becoming lost assets<sup>62</sup>. If we assume that the national trajectories and targets coincide with the overall objectives of the EU, i. e., to reduce the amount of waste produced and significantly promote recycling, the amount of waste in the countries will eventually start to decrease and the importance and cost-effectiveness of waste-to-energy plants will also decrease<sup>63</sup>. When local authorities sign long-term contracts with recovery plants for the delivery of waste for incineration and the supply of heat generated, there are both financial and significant environmental risks as waste incineration plants must have a constant supply of fuel. If locally the volume of waste is reduced, the municipality may not be able to meet the supply levels and may be in danger of having to compensate/pay damages for the breach of the terms of the contract. This means that this type of waste management does not contribute to the reduction and recycling of waste produced. An example of this is Scotland, where excessively concluded incineration contracts for excessive volumes of waste/MWh mean that local authorities have little incentive or opportunity to reduce waste generation and improve recycling, as this would further reduce the supply of waste for incineration below the contractual levels<sup>64</sup>.

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<sup>58</sup> Homaio, 2024. [What is the future of the EU ETS?](#)

<sup>59</sup> *ibid.*

<sup>60</sup> Nordic Council of Ministers, n.d. [Waste incineration in the Nordic countries](#)

<sup>61</sup> Kinnaman, Yamamoto, 2023. <https://www.mdpi.com/2071-1050/15/4/3234>

<sup>62</sup> See 15.

<sup>63</sup> Berghe et al., 2020. <https://www.mdpi.com/2071-1050/12/12/4889>

**Import of waste and overcapacity.** Although the creators of the two Pierīga Region projects confirm that only local waste will be used in the projects, there is considerable concern that the construction of such projects will require the importing the waste, in particular in view of the fact that the planned incineration volumes at each plant are estimated at between 143 000 and 200 000 tonnes per year. As stated at the meeting on incineration on 11 June, projects of this scale present a high risk of inevitable waste imports<sup>65</sup>. A distinct example for this is a situation in neighbouring countries that already have problems with local waste shortages. In Lithuania, despite the entry into force of the ban on the import of waste, scandals have broken out in media about illegal imports of waste from Ireland, imported under the cover of sorting for incineration at *SIA Gren* (formerly *Fortum*) plants, as well as illegal imports of plastic waste from Poland<sup>66, 67</sup>. Estonia has now become a waste importing country in order to continue operating Iru CHP plant, because volume of locally generated waste is insufficient<sup>68</sup>. Estonia is currently exposed to EU litigation and penalties for failure to meet recycling targets, as waste recycling in the last decade has not improved<sup>69</sup>. Sweden also has long-standing problems with excess incineration capacities, forcing it to import waste from Norway<sup>70</sup>. Insufficient comprehensive analysis of waste volumes and streams in Latvia can lead to the necessity to import waste for waste-to-energy schemes and lost opportunities for industrial symbiosis. It should be taken into account that waste is already being imported for the provision of industrial processes at *SIA SCHWENK Latvija*, although it would be most beneficial for the company to receive local waste, but currently it is not processed to sufficient quality<sup>71</sup>.

**Potential environmental pollution and hazardous waste.** Improvement of sorting of waste will reduce the amount of recyclable materials (e.g., bio-waste, paper, recyclable plastics) in waste incineration. This means that only unrecyclable waste, which often contains large quantities of solid plastics and other fossil raw material products resulting in high CO<sub>2</sub> emissions and contains even more harmful impurities that can be released into the air, will be available for incineration<sup>72</sup>.

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<sup>64</sup> Friends of the Earth Scotland, 2022 <https://foe.scot/wp-content/uploads/2022/02/Contracts-briefing-Feb-2022-1.pdf>

<sup>65</sup> Meeting of the Environmental, Climate and Energy Subcommittee of Economic, Agricultural, Environmental and Regional Policy Committee of 14th Saeima of the Republic of Latvia, 11 June, recording (00:44:00)

<sup>66</sup> <https://www.lrytas.lt/verslas/energetika/2015/10/08/news/skandalas-klaipedoje-atliekos-buvo-vezamos-is-airijos-2964678>

<sup>67</sup> <https://m.kauno.diena.lt/naujienos/verslas/ekonomika/svetimos-atliekos-i-lietuva-pateko-vilkikais-skriaudzia-savus-kad-daugiau-uzdirbtu-1043444>

<sup>68</sup> <https://arileht.delfi.ee/artikkel/75792269/jaatmete-poletamine-jattis-prugilad-joude>

<sup>69</sup> <https://news.postimees.ee/8047929/waste-recycling-fine-on-horizon-for-estonia-if-no-progress-is-made>

<sup>70</sup> See 2.

<sup>71</sup> See 7.

Furthermore, it is important to note that waste-to-energy does not eliminate the need for disposal. After incineration there remains significant portion (typically 17-30% of the initial waste) of ash and soot, significant part of which is hazardous waste.<sup>73, 74</sup> In Latvia, it is not yet clear how to manage these ashes effectively. Also in the case of Ventspils new plant, project developers acknowledged that it has not yet been decided how ash and hazardous dross will be disposed of <sup>75</sup>. While waste-to-energy schemes reduce the need for waste disposal, the resulting non-hazardous ash for most part is landfilled and special management arrangements are required for hazardous waste. The German pilot project, which uses hazardous ash in road construction, is often used as a good example, but it has been shown that hazardous compounds from these roads can be released into the environment and cause pollution in contact with water<sup>76,77</sup>.

## Conclusions and recommendations to decision-makers

1. **Support for waste-to-energy production has reduced significantly.** The European Commission prioritizes waste prevention, re-use, separate collection and recycling rather than incineration or disposal. EU funding is directed towards projects that contribute to the achievement of sustainability objectives in both heating and waste management. In future, this also entails a significant increase in the cost of GHG emissions from waste incineration. Latvia's position on district heating does not include waste recovery as a sustainable form of heat supply.
2. **Waste-to-energy schemes cannot be considered a sustainable solution for district heating.** Incineration of waste, in particular plastics and other fossil source products, results in high GHG emissions, hampering the achievement of climate neutrality objectives, and causing air pollution with substances harmful to health. Incineration of waste does not exclude the need for disposal due to the production of slag. Reduction, sorting and recycling of waste have more significant impact on reduction of GHG emissions and the amount of waste disposed.

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<sup>72</sup> ClientEarth Communications, 2021. <https://www.clientearth.org/latest/news/the-environmental-impacts-of-waste-incineration/#:~:text=Due%20to%20increasing%20quantities%20of,local%20air%20quality%20than%20landfill>

<sup>73</sup> Song et al., 2004. [Characteristics of ashes from different locations at the MSW incinerator equipped with various air pollution control devices](#)

<sup>74</sup> Energy Justice Network, n.d. [Trash Incinerator Ash - Nearly 30 tons for every 100 tons burned | Energy Justice Network](#)

<sup>75</sup> *Ventspils labiekārtošanas kombināts*, n.d. [Paziņojums par sabiedrisko apspriešanu](#) (Call for public consultation)

<sup>76</sup> Investigate Europe, 2023. <https://www.investigate-europe.eu/posts/burning-questions-remain-over-europes-waste-incinerators>

<sup>77</sup> Clavier et al., 2020. <https://www.sciencedirect.com/science/article/abs/pii/S0921344920302068>



3. **The use of public funds and municipal guarantees for waste incineration projects poses a number of environmental and financial risks.** In order to maintain the conditions required for incineration waste recovery plants must operate continuously. If the final product of waste recovery is thermal energy is (rather than as waste heat or a by-product), a situation may form in which there is an unfavourable incentive to maintain a high incineration rate, thus not encouraging waste recycling. In the event of reduction of volume of local waste (as provided for in EU legislation), when municipalities have long-term contracts with guarantees for delivery of waste and receipt, it could occur that the plant is not supplied with sufficient amount waste to be incinerated and therefore the municipality has to pay compensation/penalties for breach of the contract and plant operators will be forced to import the waste.
  
4. **In order to achieve climate goals, Latvia needs to significantly increase waste sorting and recycling capacity and introduce sustainable heating solutions.** Latvia lacks a thorough and comprehensive analysis of [alternatives of] waste streams and a detailed understanding of experience in neighbouring countries and the potential of local industrial symbiosis. Much of the waste currently produced and disposed of could be reduced by investing heavily in sorting and recycling systems and preparing unrecyclable material as FfW for the needs of the local cement plant. Investing in energy efficiency improvements and sustainable heating technologies, such as industrial heat pumps, solar thermal collectors and flexible heating networks promotes environmentally friendly and sustainable heating<sup>78</sup>.

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<sup>78</sup> <https://bankwatch.org/wp-content/uploads/2024/04/Cleaning-up-District-Heating-ENG.pdf>

