

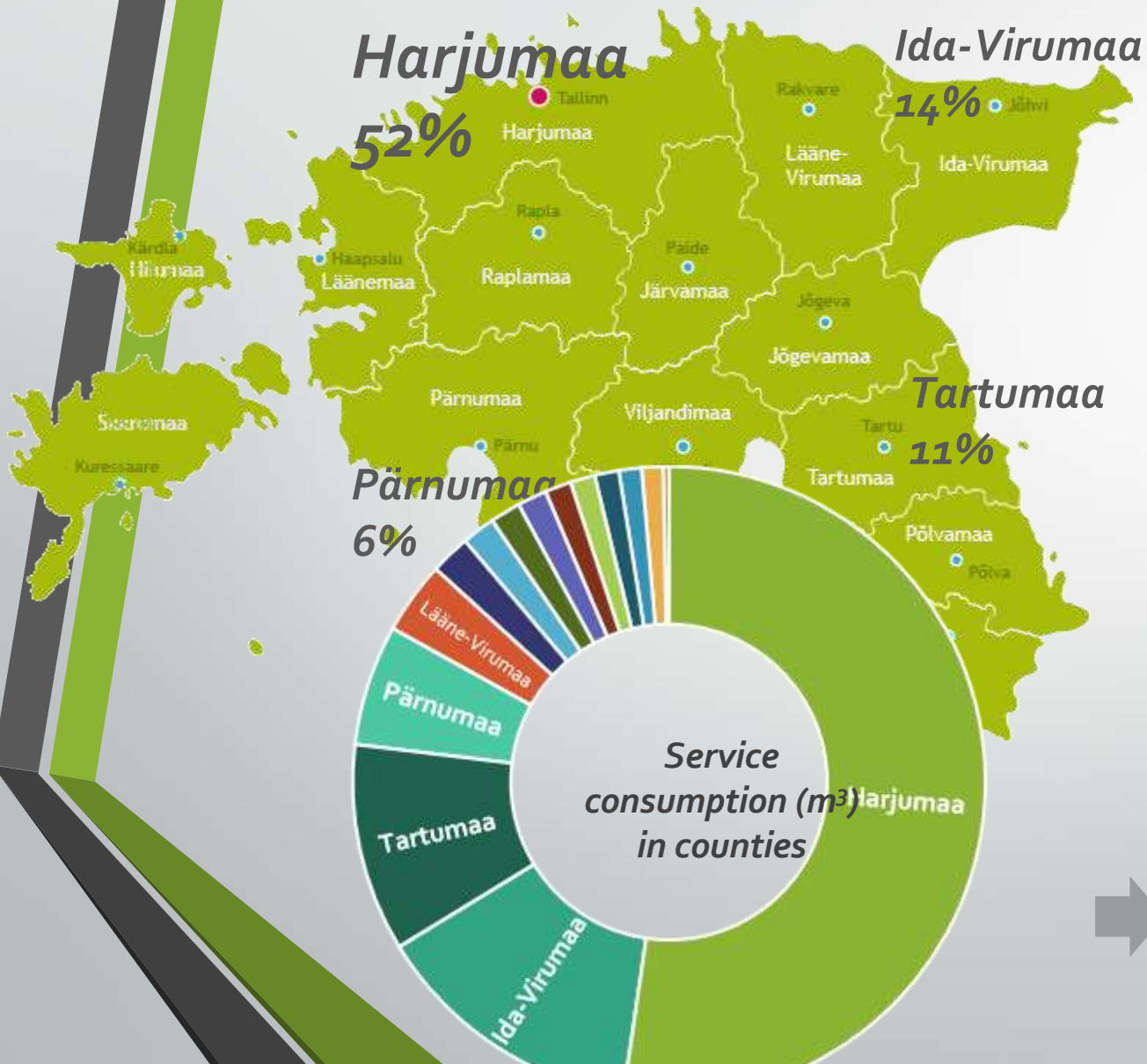
„Investments and sustainability in Estonian water companies“

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Current situation-1



Major concerns of Estonian W&WW sector

- Fragmentation and inequality →
Tariffs range: 2...6,7 EUR/m³ (water+WW incl. VAT)
 - Highest operating costs in areas with <2,000 PE
 - Lowest operating costs in areas with >10,000 PE
- Proportion of fixed assets acquired by means of grants is about 70%!
- EU and national grant between 2008-2021 over 727 miljon euros

How to ensure high quality service provision and necessary infrastructure investments with affordable prices in all regions after governmental aids and EU subsidies finish?

Current situation-2

Distinction by wastewater collection areas (agglomerations):

57 areas with over 2,000 PE

471 areas with less than 2,000 PE

≈2,7 EUR/m³

Weighted average water price with VAT incl.

≈3,1 EUR/m³

≈4 EUR/m³
≈150 service providers

5 service providers
ASTV, Tartu Veevärk, Pärnu Vesi,
Järve Biopuhastus, Narva Vesi

23 service providers

24 service providers

Service providers
operating only in areas of
<2000 PE

Operating in areas of
>10,000 PE

Operating in areas of
2000-9999 PE

700,000 pers.

230,000 pers.

85,000 pers.

90,000 pers.



20% W&WW volumes

5% W&WW volumes

5% W&WW volumes

70% W&WW volumes

Main problems - 1

- In Estonia, it is recommended that the price of waterservice should not exceed 2.5% of a household member's income (OSCD recommendation 4%)
- Minimum salary in Estonia is 584 eur and average salary is 1580 eur
- If there are three members in the family, one earning the minimum wage and the other the average wage + one child, then with an average water consumption of 4 euros per cubic meter, this would already be over 4 % of the household member's income

Main problems - 2

- As the investments made with the grant aid must not be included in the price of water, future replacement investments will significantly increase the price of water for consumers, which will exceed their solvency.
- Around 70% of fixed assets in the balance of water companies has been acquired using grant aid. Therefore, most of the value of the assets is not included in the price of water.
- The price of water would increase significantly if further (replacement) investments were made without support.

Solutions

- 1. The state will continue to support water companies in order to avoid rising water prices and ensure a proper water service.**

At present, the national position is that support for the water sector will largely disappear

- 2. Consolidation of water companies**

Possible scenarios :

0 – Local government (LG)-based water utilities after administrative reform (ca **50-70** entities)

1 – County-based water utilities (**15** entities)

2 – Regional water utilities (**2-3** entities covering several counties, max 4 if Tallinn is included)

3 – Country-wide water utility (**1** – with or without Tallinn?)

Financial and economic analysis (FEA)

How would W+WW prices develop in next 40 years if all required replacement investments were done using self-financing only?

- ✓ The replacement investments forecast is based on the replacement costs calculated for the current systems:

→ Approx. 263 million EUR required every replacement investment cycle (5 ys)

- ✓ Price prognostic is based on the official price regulation method by the Competition Authority:

Operating cost



Capital cost



Allowed rate of return: 5,45% of WACC

Alternative is considered unsustainable when the W&WW price overcomes chosen affordability level

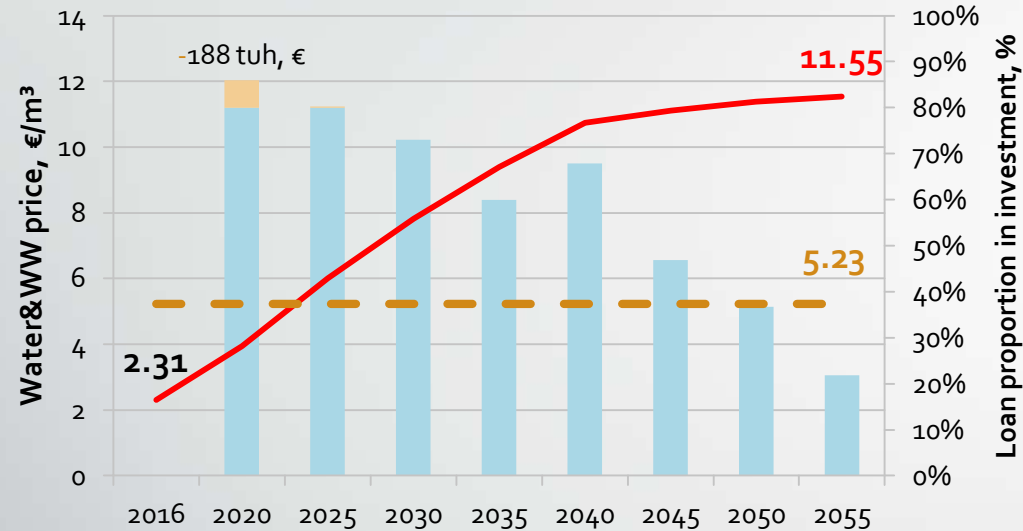
5,23 EUR/m³ + VAT*

→ At this price the cost of water & WW service overcomes **4% of the average household net income for the poorest 50% of the population** (considering the average of the first 5 income deciles)

**present prices were used throughout the study without considering the inflation*

o: Municipality-based water utility

Average rural municipality: ≈4,000 clients

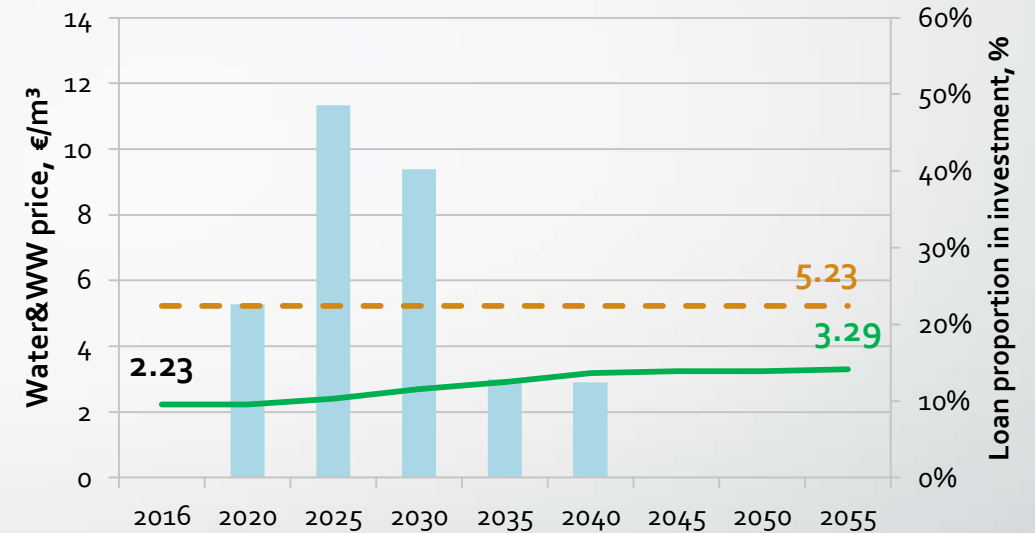


Water utility service in rural municipalities with low population density is not sustainable!

Generalizing this result to 52 rural municipalities

- Cumulative governmental aid by 2055 required to maintain the price below 5,23 EUR/m³+VAT:
1,360 million euros in total

Pärnu city: ≈43,000 clients



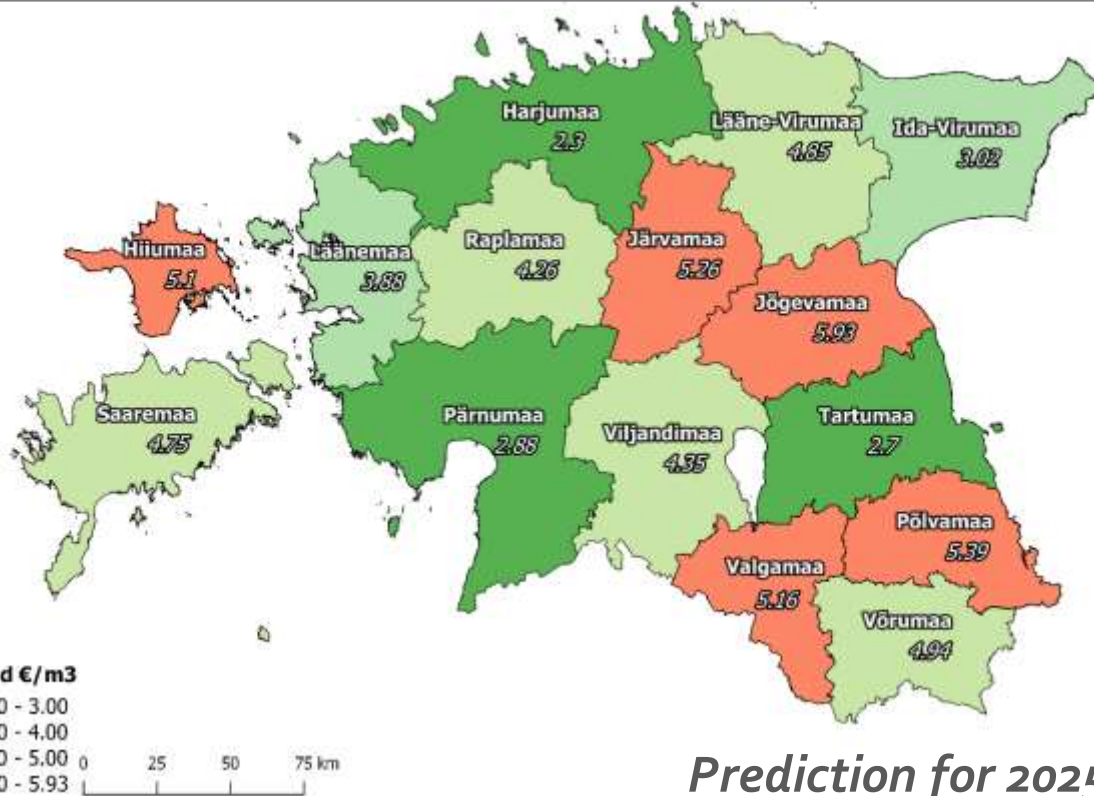
The cost efficiency and sustainability of bigger Estonian cities, e.g. Pärnu, cannot be generalized to smaller cities.

How much could the bigger cities expand while still maintaining the tariffs affordable?

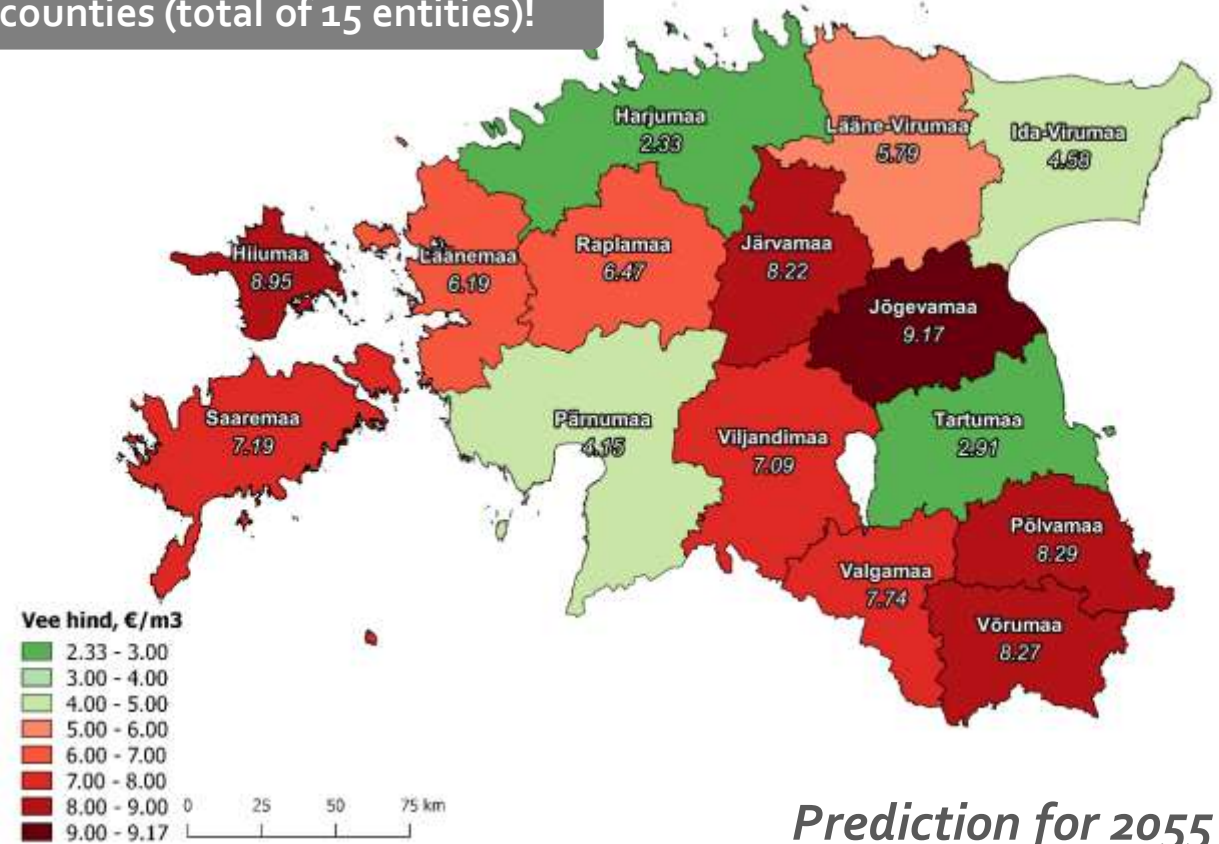
1: County-based water utility

COMPARISON OF COUNTIES

83% of Estonian water & sewage service (in m³) is consumed in 4 counties (total of 15 entities)!



Prediction for 2025



Prediction for 2055

By the end of the cash flow analysis period only 4 bigger counties out of 15 are sustainable!

Cumulative governmental aid by 2055 required to maintain the price below 5,23 EUR/m³+VAT in the rest of the counties:

Approx. 300 million euros in total

2: Regional water utility

- Datamodel developed for this survey permits analysing all scenarios of regional water utilities by integrating different counties.
- When „constructing“ the regional water utility, it is rational to choose at least one of the 4 strong counties as nucleus:
Tartu, Pärnu, Ida-Viru and Harju county WITH Tallinn (Harju county without AS Tallinna Vesi is NOT sustainable!)
- **If Tallinn is left out**, then 2-3 regional water companies could still maintain the service price below the sustainability limit until 2055 (final tariffs $\approx 4,5-5$ EUR/m³)



Veehind Põhja-Eesti regioonis
2055. aastal



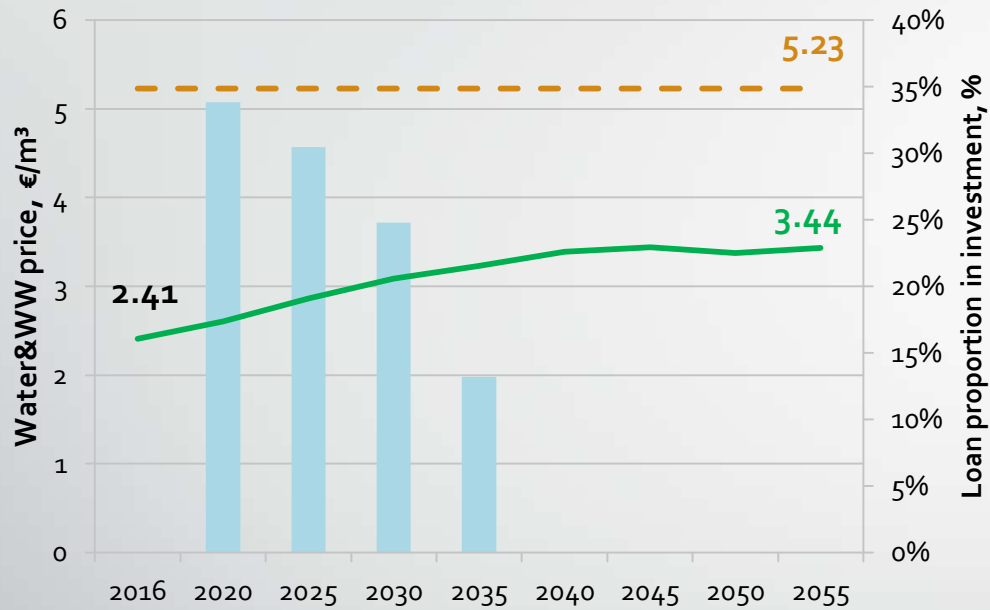
Veehind Ida-Eesti piirkonnas 2055. aastal



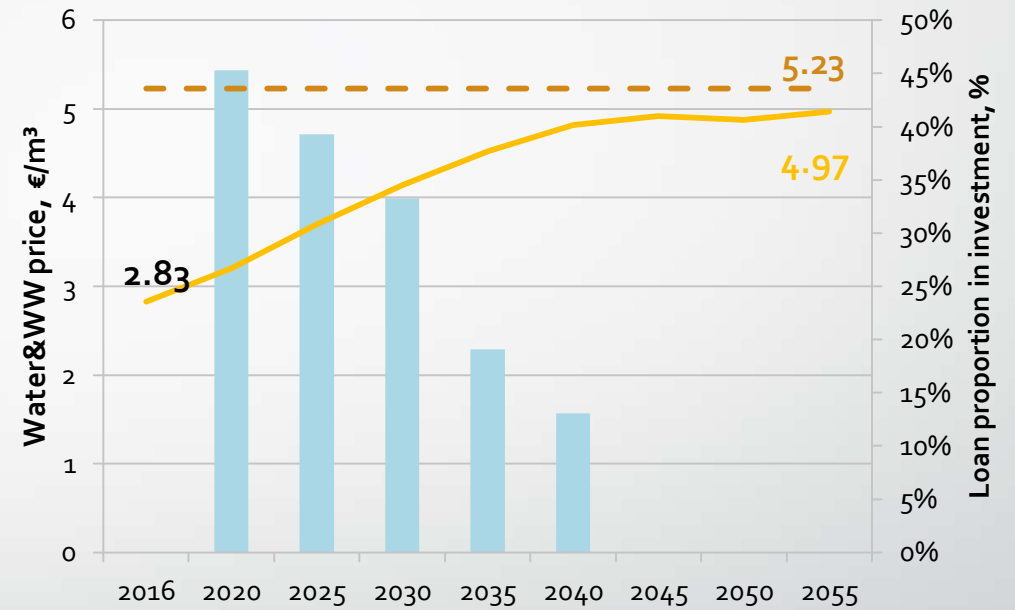
- **Harju county with Tallinn** is that much more cost efficient county, that it could incorporate all the weaker counties alone and would still keep the price below **3,5 EUR/m³** throughout the analysis period.

3: Country-wide water utility

WITH Tallinn: ≈1,13 million clients



WITHOUT Tallinn: ≈690 000 clients



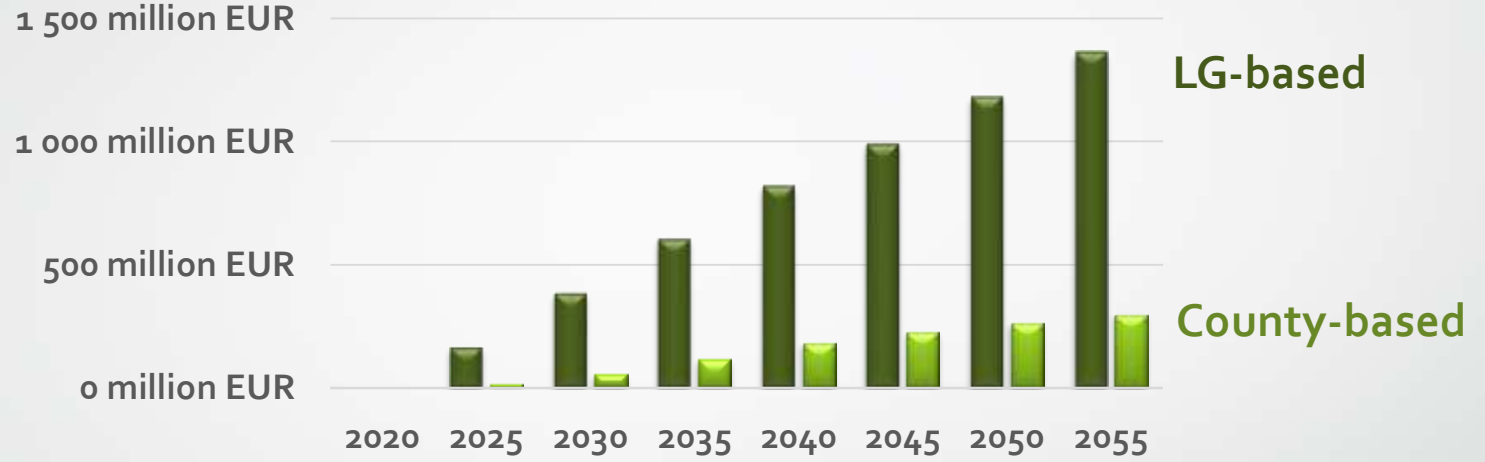
One country-wide water utility would be sustainable with or without Tallinn, however, the inclusion of Tallinn would lower the service tariffs importantly:

- 3,44 EUR/m³ by 2055 WITH Tallinn
- 4,97 EUR/m³ by 2055 WITHOUT Tallinn

Comparison of alternatives

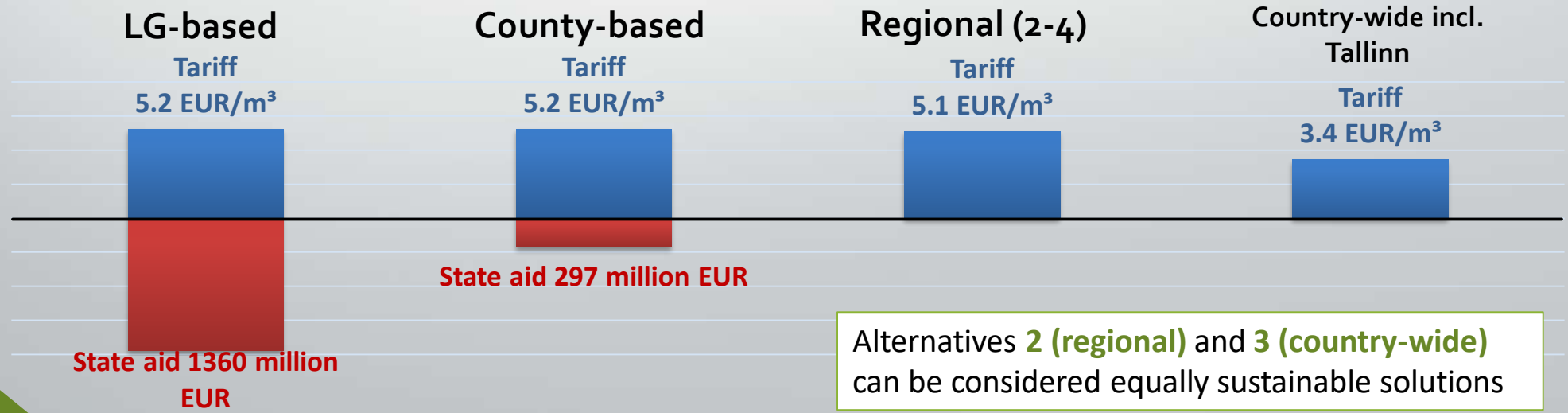
State aid requirement to stay below the affordability limit

5,23
EUR/m³




Comparison of alternatives in case LG and county-based models would receive state aid:

Prediction by 2055



Alternatives 2 (regional) and 3 (country-wide) can be considered equally sustainable solutions



Thank you for your attention!