

Biogas development – public procurement, networks, and policy instruments



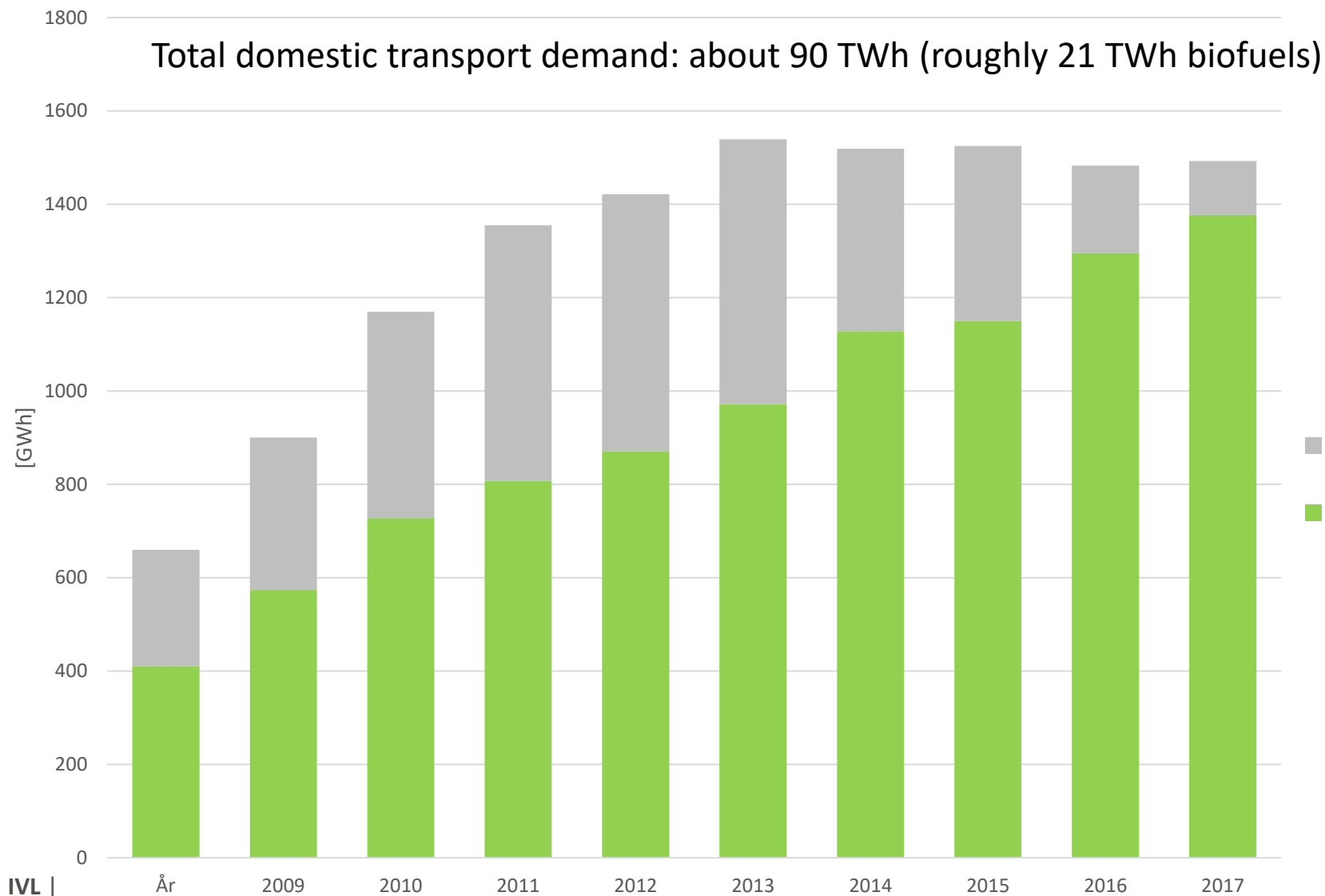
Julia Hansson, IVL Swedish Environmental Research Institute

Tomas Lönnqvist

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Use of vehicle gas in Sweden 2008-2017

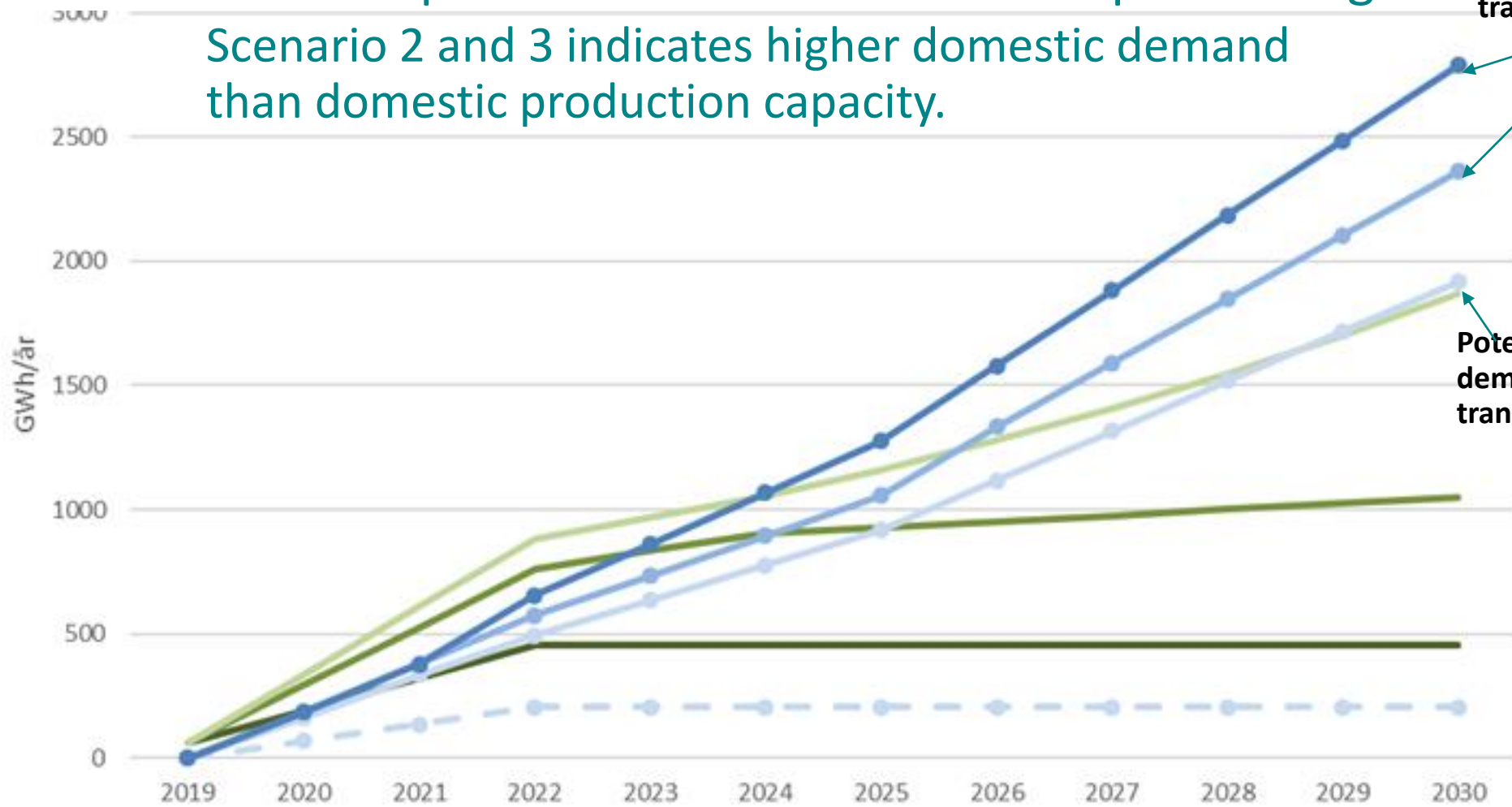


Biogas in Sweden represent 74% of total biogas use for transport in the EU (use also in GER, NL, UK, FIN, DK, AUS, and ITA)

Liquified methane (total):
2018: 4,4 GWh

Swedish scenarios for production and demand of liquified biogas

Scenario 2 and 3 indicates higher domestic demand than domestic production capacity.



Potential increased demand from road transport + shipping

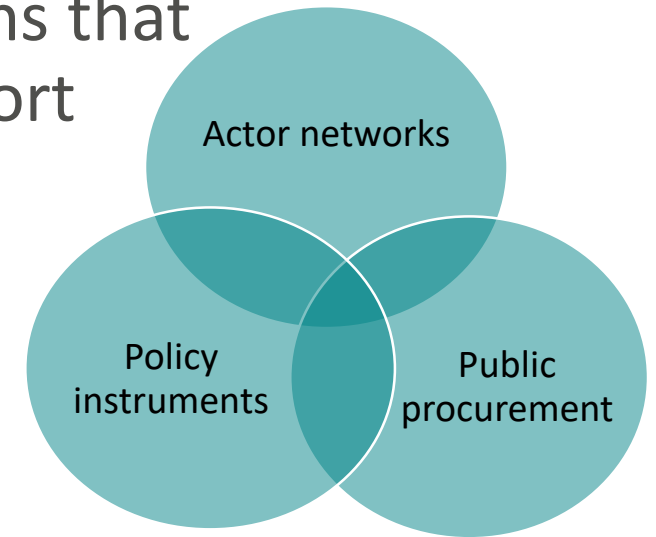
Potential increased demand from road transport

- Produktion - scenario 1
- Produktion - scenario 2a
- Produktion - scenario 3b
- Efterfrågan - scenario 1
- Efterfrågan - scenario 2
- Efterfrågan - scenario 3a
- Efterfrågan - scenario 3c

Source: Hjort et al., 2019. Utsikt för förnybar flytande metan i Sverige till år 2030. Report, f3 Swedish Knowledge Centre for Renewable Transportation Fuels

AIM

- to provide decision support and recommendations that supports local biogas development for the transport sector, aimed for local policy makers.



HOW?

- Interviews with policy makers and literature reviews.
- Focus on three tools for biogas development: public procurement, actor networks and policy instruments.
- Three Swedish case studies: Gothenburg/Västra Götalands Region, Luleå/Norrbotten and Gotland.

Identified Success Factors

- A clear political ambition and appropriate decision-making basis
- Environmentally friendly public procurement
- Follow-up of public procurement
- Dealing with an uneven system growth
- Collaboration and diffusion of information and knowledge

A clear political ambition and appropriate decision-making basis

Political objectives need to be implemented and municipalities/regions can support biogas by choosing this option themselves.

Example: Gotland has pointed out biogas as the primary transportation fuel and given it priority in the public procurement process.

Environmentally friendly public procurement

Specific contractual conditions in public procurement can allow suppliers to adjust gradually to meet demands (for example gradual increase in gas vehicle fleet). Result: more suppliers of biogas related services can participate in the procurement.

Example: Västra Götaland prioritizes gas and electric vehicles for transport purchases, Gotland has demand for biogas vehicles while Luleå demand use of renewable fuels.



Follow-up of public procurement

Follow-up ensures compliance

Follow-up should be executed at several levels: decisions, procurement, and suborder.

Example: Västra Götaland demands a written exemption to suborder a diesel vehicle for regional actors.

Dealing with an uneven system growth

Biogas is a large technical system that develops unevenly. It is an important challenge to address which parts of the system that are lagging behind.

Example: In Luleå investments in infrastructure are needed to allow biogas demand to grow. In other parts of Sweden other reverse salient are seen, often the demand side.



Collaboration and diffusion of information and knowledge

- Actor networks referred to as collaborative management structures, public-private partnerships and Triple-Helix structures.
- Actor networks can help to account for critical elements and dynamic aspects of biogas development.
- Important dimensions: actor diversity, integration and stability

Example: Actor networks crucial in all regions. Different strengths and weaknesses of the actor networks in the different case regions.

Research team

- IVL and LTU
- IVL: Tomas Lönnqvist, Sara Anderson, Sven-Olof Ryding, Anders Hjort and Julia Hansson
- LTU: Robert Lundmark and Patrik Söderholm



Reference group



Med stöd från



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Outcomes

- Our report will be finalized this autumn
- Ongoing article “*Establishing Local Biogas Systems: Policy Incentives and Actor Networks in Swedish Regions*” intended for the special edition of Biomass & Bioenergy.

Questions?

Tomas Lönnqvist tomas.lonnqvist@ivl.se

Julia Hansson julia.hansson@ivl.se