



**Energy Union  
Choices**

# **Evaluation of security of supply and gas infrastructure needs in BEMIP**

BEMIP Regional Gas Group, October 26<sup>th</sup> 2016

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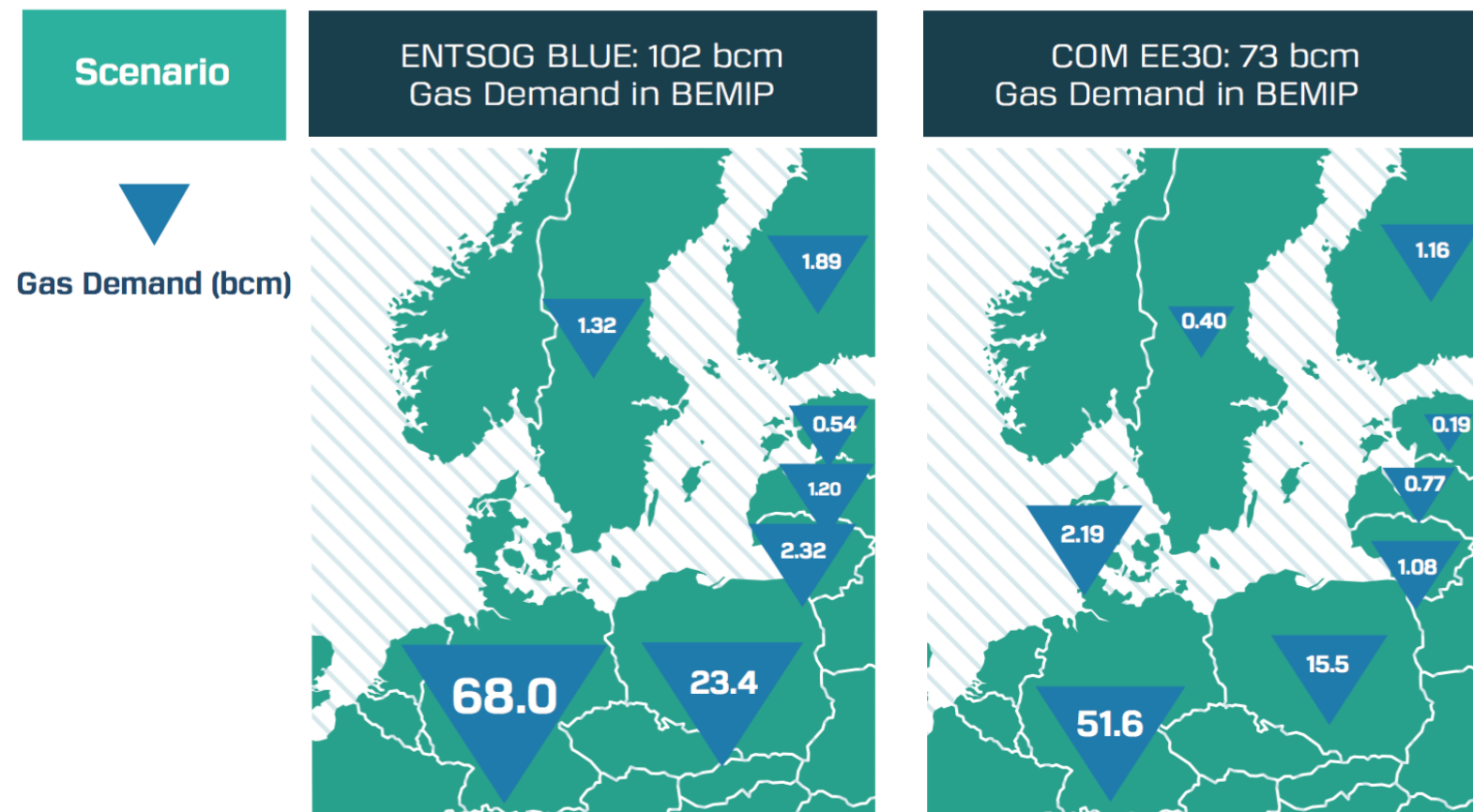
# Approach and Methodology

SCENARIOS	ENTSO-G BLUE TRANSITION	COM PRIMES EE30
Gas demand in BEMIP	102 bcm	73 bcm
EXISTING INFRASTRUCTURE	STANDARD CASE + RUSSIAN DISRUPTION CASE	
EXISTING INFRASTRUCTURE + 2nd PCI list		



# Gas demand differs significantly depending assumptions on energy efficiency

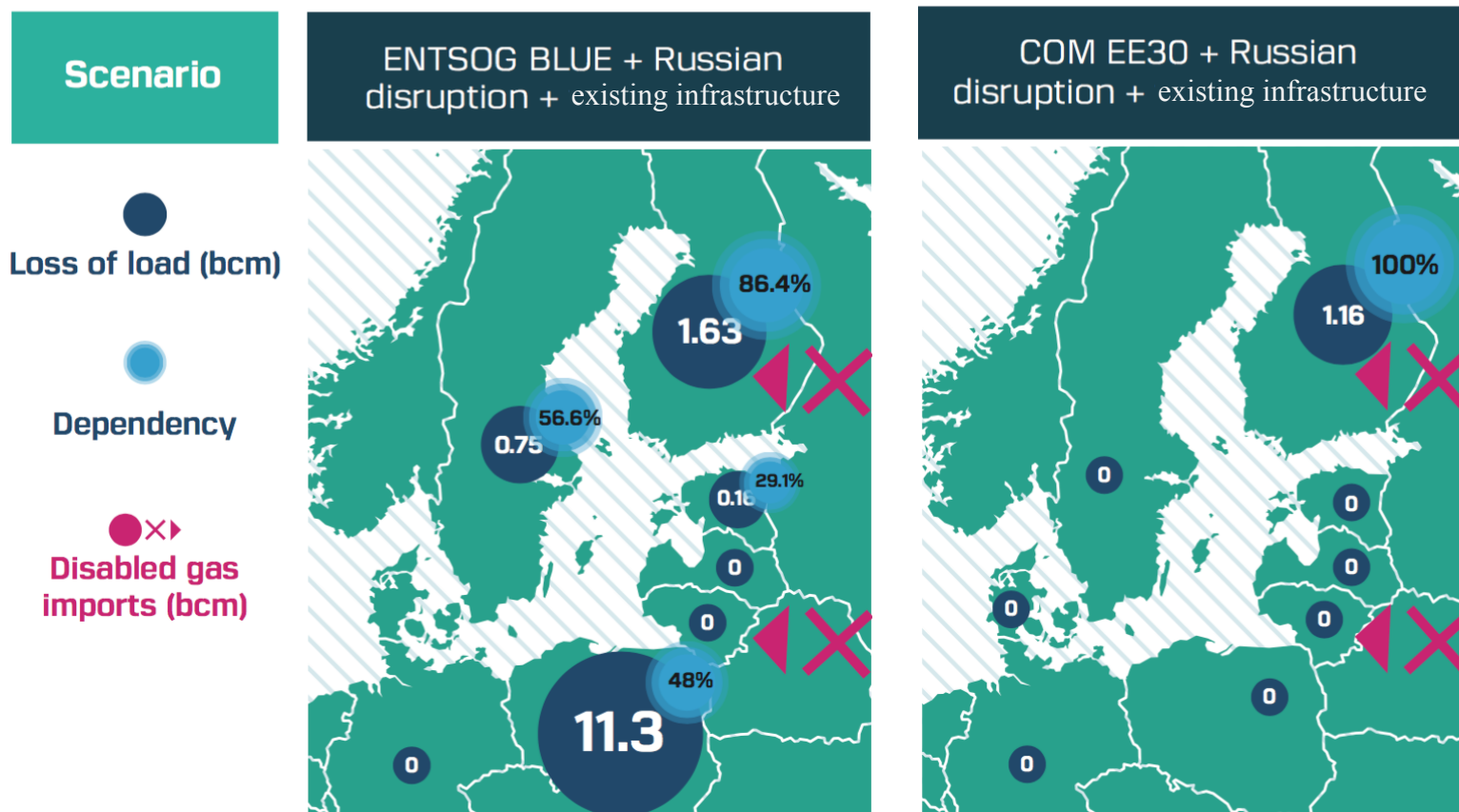
Projections of gas demand differ up to 29 bcm depending on progress towards the EU's climate and energy goals for 2030





# EU climate and energy policy greatly reduces gas security of supply concerns in BEMIP region

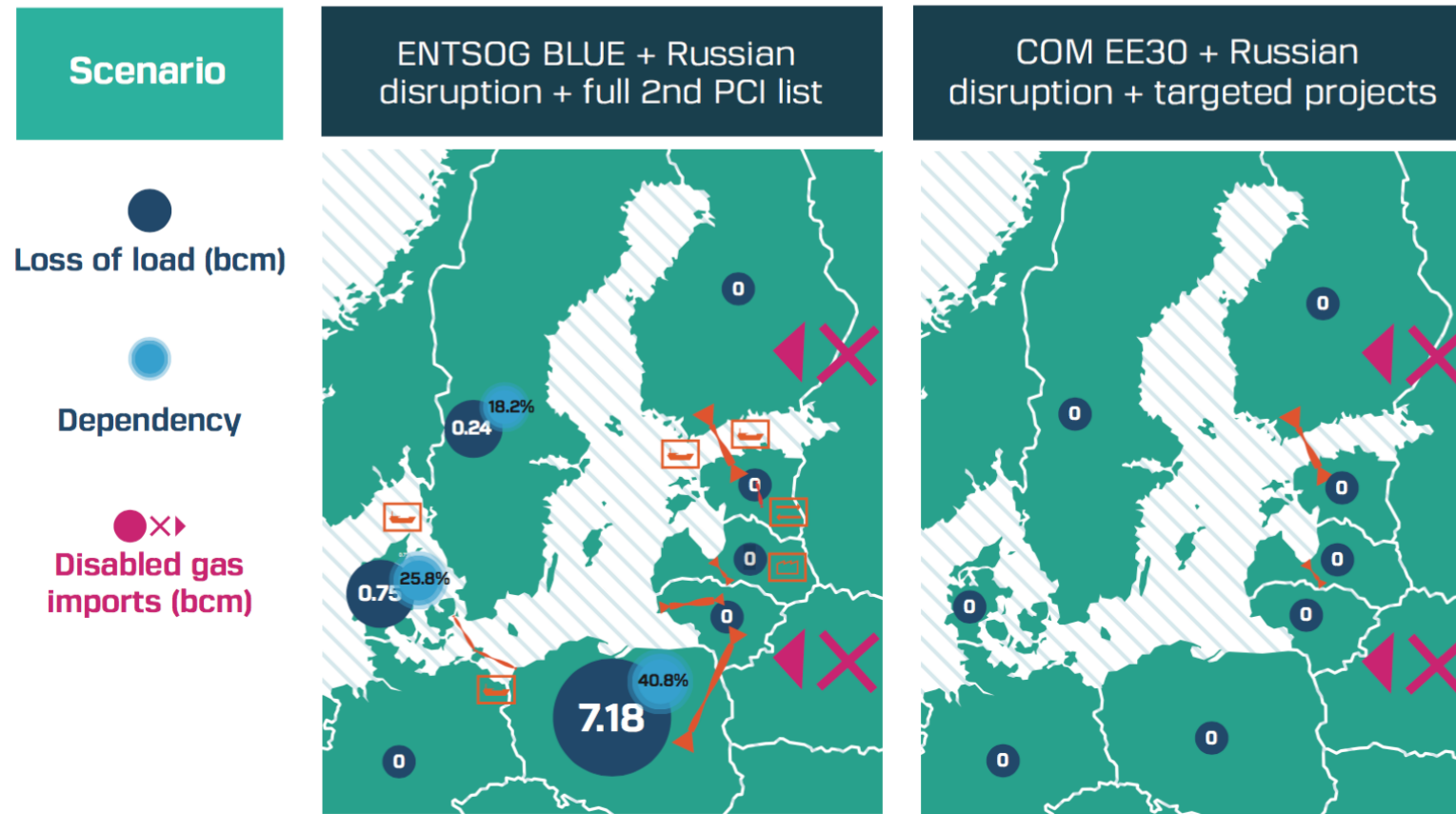
In case of a year-long Russian gas import disruption case, existing infrastructure already significantly reduces loss of load issues. In EE30 scenario this is limited to Finland.





# Targeted infrastructure projects can significantly improve gas supply security, if combined with demand moderation policies.

In a 2030 compliant scenario, two intra-EU gas infrastructure projects solve loss of load concerns. Without these demand moderation policies, even full implementation of current PCI lists is insufficient.





## PCI utilisation rates in Russian gas disruption case

LNG Terminal	PCI Send-out capacity	ENTSOG Blue	COM EE30
Swinoujście	2.5 bcm/y (7.5bcm/y in total)	100%	0%
Gothenburg	0.9 bcm/y	100%	0%
Tallinn - Paldiski	6.5 bcm/y (aggregated)	66% (3.5 bcm/y)	0%

Gas Storage	Additional withdrawal capacity	ENTSOG Blue	COM EE30
Incukans UGS enhancement	1.7 bcm/y	0%	0%

Transmissions	PCI capacity	ENTSOG Blue	COM EE30
Estonia <-> Finland	2.7 bcm/y	100%	100%
Latvia <-> Estonia	3.7 bcm/y	0%	0%
Lithuania <-> Latvia	2.0 bcm/y	4%	8%
Poland <-> Lithuania	2.5 bcm/y	100%	0%
Denmark <-> Poland	10.1 bcm/y	25%	0%



# Overview of findings

		ENTSOG Blue Transition	COM EE30
<b>Standard case</b>		No loss of load	No loss of load
<b>In case of Russian disruption</b>	with existing infrastructure	Loss of load across all BEMIP countries (15 bcm)	Loss of load limited to Finland (1.2 bcm)
	with existing infrastructure and full 2 <sup>nd</sup> PCI list	Decreased, but significant loss of load remains in some countries	No loss of load
<b>Assessed need for infrastructure</b>		<ul style="list-style-type: none"><li>• Additional infrastructure needs, beyond full 2<sup>nd</sup> PCI list</li><li>• Only part of PCIs needed in full</li></ul>	<ul style="list-style-type: none"><li>• Limited set of projects from PCI suffices</li><li>• No additional infrastructure needs beyond that</li></ul>



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**Thank you!**

