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10 1. Introduction

11 The world is committed to achieving carbon neutrality by mid-century. Undis-
12 puted thereby are measures that increase the share of renewable energy in the
13 energy system and thus replace fossil energy sources [1]. However, the speed
14 on the way there and the specific target year in which net zero emissions are
15 emitted vary between regions. China, for example, has defined 2060 as the tar-
16 get year [2], while Europe aims to achieve climate neutrality in 2050 [3]. For
17 these regions and all others, the question arises of how this sustainable energy
18 transition is shaped in concrete terms [4]. The consensus is that transitional
19 solutions and so-called bridge technologies (or bridge fuels) are necessary if re-
20 newable energy cannot fully supply the energy system [5]. A pillar of these
21 bridge technologies, namely liquified natural gas (LNG), is the subject of this
22 paper.

23 So far, the role of LNG in energy systems has differed significantly among global
24 regions. Traditionally, the Asian market and particularly the Japanese one had
25 a strong focus on LNG. Other countries, for example, China and South Korea,
26 have shifted to LNG and increased their demand partly significantly in the past
27 decades [6].

28 In the context of Europe, LNG's importance was minor since Europe has been
29 supplied by piped-gas in the last decades. Main supply country for European
30 gas demand was Russia, as the share of russian piped-gas was x% in 20xx. Not
31 only the geographical Nähe but also the general cheap price of Russian piped-
32 gas in the past was the main reason why Europe as LNG market has been
33 unattractive until now. This situation has been changed fundamentally as a
34 result of the invasion of the Ukraine by Russia in February 2022. Als Reaktion
35 belegt mit Sanktionen worauf Russland die versorgung eingestellt hat.

- 36 • bezogen auf europa piped-gas bis vor kurzem
- 37 • weshalb Europa als LNG Markt bisher uninteressant war
- 38 • durch den Angriffskrieg fundamental geändert

- 39 • LNG steht nun auf der Agenda in EU
- 40 • essenziell für die versorgungssicherheit in europa (neue Terminals an den
- 41 Kusten gebaut)
- 42 • krisenmodus lng vergleich mit piped gas nicht möglich da es um ver-
- 43 sorgungssicherheit geht aber gleichwertig mit dem einsatz von öl its emis-
- 44 sions
- 45 • aktuell supply möglich weil china sehr geringen verbrauch hat, daher
- 46 derzeitige situation nicht representativ
- 47 • deswegen auch für exportländer attraktiv
- 48 • unklar wie sich mittel- bis langfristig equilibrium einstellt bzw. willingness
- 49 to pay sein wird und
- 50 • dazu trägt auch bei dass viele länder im jahre 2022 versucht haben sehr
- 51 kurzfristige verträge abzuschließen im krisenmodus

52 the core objective of this work...

53 **Declaration of interests**

54 None.

55 **Declaration of Competing Interest**

56 The authors report no declarations of interest.

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