# GETTING REAL ABOUT A EUROPEAN GREEN DEAL

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### The Challenge

"I want the European Green Deal to become Europe's hallmark" (Ursula von der Leyen; Euractiv, Sept. 11)

"If fiscal policy had been in place, or would be put in place, the side-effects of our monetary policy would be much less, the action of our decisions today would be much faster and therefore the need to keep in place some of these measures would be much less" (Mario Draghi, Financial Times, Sept. 13).

#### **Five Benchmarks**

- A European Green Deal can and should get Europe on a new growth path characterised by:
  - 1) Carbon emissions decreasing by more than 5% p.a.
  - 2) Real annual growth rates around 3%
  - 3) Inflation close to, but below 2%
  - 4) Official plus disguised unemployment below 5%
  - 5) Social and regional inequality back to 1980 levels

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#### The Structure of the Deal

- In 2020, additional public investment of 1% of EU GDP, i.e. about 150 billion €.
- Raised on financial markets at rates below inflation.
- with the following expenditure profile:
  - 1) 50% on energetic renovation of the *building stock*
  - 2) 20% on adaptive green *infrastructure*
  - 3) 20% on advanced education for green *vocational skills*
  - 4) 5% for *R&D* in IT-related decarbonization
  - 5) 5% for subcontracting EGD management tasks
- Evolving after 2020 so as to reach the benchmarks.
- If building political will should take more time, the deal might be implemented in 2021.

### A Feasibility Check

- In Europe, there are about 20 billion square meters of residential floor space.
- Only a tiny fraction of it fulfills reasonable energy efficiency standards.
- Energetic renovation across Europe costs from 200 €/m<sup>2</sup> upwards.
- Financing half of the renovation costs for 0.75bn m<sup>2</sup> of European floor space (less than 5%) implies an investment of 75 bn €, i.e. 0.5% of EU GDP.

#### Germany Can Do the Right Thing

- "The different factions in the ECB are at each others' throats and all because the Germans don't want to do a fiscal stimulus" (M. Krauss in Financial Times, Sept. 13)
- In the following, we make a proposal for how Germany can do the right thing. Of course, many modifications are possible to further improve the policy package. The basic structure of the package applies for Europe as well.

## Avoiding a German Slump

- The actual growth rate of the German economy in the past years was in the order of 2%.
- For 2019 and 2020, growth forecasts are in the order of 0.5% to 1%.
- This has serious implications for incomes, employment and social and regional inequality all with massive political consequences.
- Stabilising growth requires a stimulus leading to about 1% of additional growth.
- The potential German growth rate is closer to 3% than to 2%, so that in fact under present condition a stimulus leading to about 2% of additional growth would be worth considering.

### What Size of Stimulus?

- German **GDP** presently is about € **3.3 trillion** (10<sup>12</sup>).
- So, **1%** of GDP are € **33 bn** (10<sup>9</sup>).
- A reasonable benchmark for the **relevant multiplier** under present conditions in Germany is **1.5** (see e.g. Boitani and Perdichizzi, 2018; Corsetti et al., 2010).
- Therefore, a stabilizing stimulus would be in the order of €
  22 bn (10<sup>9</sup>), i.e. less than 0.7% of GDP.
- A potential-oriented stimulus would be in the order of € 44 bn (10<sup>9</sup>), i.e. less than 1.5% of GDP. In combination with decarbonization, it would address challenges like those of digitalization and inequality.
- In the following, we consider a middle way: a stimulus of €
  33 bn.

## A German Green Growth Stimulus

- Energetic retrofitting and construction:
  - single family houses:
  - other buildings:
- Adaptive Green infrastructure:
- Advanced education for green skills:
  - construction sector:
  - other sectors:
  - teachers:
- R&D for IT-related decarbonization:
- Subcontracting management tasks:
- Total:

- € 15 billion
- € 5 billion
- € 5 billion
- € 3 billion
- € 1 billion
- € 1 billion
- € 2 billion
- € 1 billion
- € 33 billion

## Single family houses

- In Germany there are about 13 million one-family houses, of which only about 10% fulfill high energy-efficiency standards.
- Average costs for energetic retrofitting are in the order of € 30 000 per house.
- Government can realize a 15 billion stimulus component by covering half the energetic retrofitting costs for 1 million houses, (less than 10% of total houses).
- The green growth stimulus can and should be implemented so as to reduce regional imbalances. For further implementation aspects see the items "advanced education" and "subcontracting".

## **Other Buildings**

- New residential buildings: There is an investment need of about 15 billion per year. Prioritizing energy efficient investments can be achieved with 2 billion.
- Energetic retrofitting of existing buildings can be triggered by targeting the least energy efficient ones with 1 bn in each of the three categories:
  - Existing residential buildings
  - Public buildings
  - Commercial buildings
- For how to implement this component see the items *"*advanced education" and *"*subcontracting".

### Adaptive Green Infrastructure

- Infrastructure investment is relevant for mobility, power transmission, and more. It will be critical to avoid locking the economy into existing or too rigid future structures.
- Average costs of new charging stations for electric vehicles may be set at € 5000. With 1 billion one can build 20 000 charging stations. Carefully placed, they can foster the decarbonization of the mobility system while accepting that electric vehicles may (and perhaps should) not conquer the whole market.
- Urgent power grid expansion can be accelerated with an additional budget of 2 bn.
- Equally urgent new structures for energy storage can and should be fostered with another 2 bn.

## Advanced education for green skills

- The green stimulus will require rapid advanced education for people in the construction sector. With monthly costs of € 5000 and three months of training, a budget of **3 billion** allows to train 200 000 people. The sector presently offers about 900 000 jobs, the training shall address people at risk of redundancy in the construction sector and in other sectors.
- The green stimulus will require rapid advanced education, although to a lesser extent, in other sectors, too. **1** bn should allow to train about 70 000 people.
- Advanced education will be essential for the teachers themselves. The German system of dual education will play a key role. To motivate and attract top people, salaries for teachers in that system must increase. 1 bn should be allocated to a combination of these two measures.

## **R&D** for decarbonization

- The energy transition requires massive investments in risky innovations. They must be embedded in a broad social dialogue about technologies, lifestyles and future values. Special attention must be paid to the IT-component of the relevant technologies. 2 billion should be dedicated to tasks like the following, without assuming guaranteed success:
- Large scale use of renewable energy to produce synthetic fuels from carbon captured at point sources and out of the atmosphere. This calls for digital technologies to optimally address the variability of renewables.
- Variants of wind energy like harnessing **high-altitude wind**. Software for tackling turbulences is a key requirement here.
- Further options offering similarly uncertain but interesting opportunities.

## Subcontracting management tasks

- The present manpower of public administration will need reinforcement to implement the green stimulus. This holds for units at all levels of the administrative hierarchy. To take advantage of and strengthen the private sector, such reinforcement should happen mainly through subcontracting and similar instruments.
- With a total of 1 billion, the federation, the "Länder" and selected units at lower administrative levels can get the resources needed to implement the green stimulus at the necessary speed.
- The use of these resources should include explicit training in the specifities of mega-project management as involved in the German energy transition.

### A Long-Term Opportunity

- With Germany seizing the short-term opportunity of a stimulus financed at negative rates, a European Green Deal is feasible with a similar initiative – providing a long-term opportunity for Europe and for Germany as well.
- To have a lasting effect in terms of additional growth of employment and productivity while reaching the goal of decarbonization, it is essential to embed the short-term green stimulus in a longterm narrative of green growth, substantiated with credible long-term measures.

#### Some useful literature

Boitani, A., Perdichizzy, S. (2018) *Public Expenditure Multipliers in Recessions. Evidence from the Eurozone*. <u>https://econpapers.repec.org/paper/ctcserie1/def068.htm</u>

Corsetti, G. et al.. (2011) What is the size of the multiplier? An estimate one can't refuse. https://voxeu.org/article/what-size-fiscal-multiplier-estimate-you-can-t-refuse.

Deutsche Energie-Agentur (2018) *dena-Leitstudie Integrierte Energiewende*. www.dena.de/fileadmin/dena/Dokumente/Pdf/9262\_dena-Leitstudie\_Integrierte\_Energiewende\_Ergebnisbericht.pdf.

Krebs, T., Scheffel, M. (2016) *Structural Reform in Germany*. IMF Working Paper 16/96. <u>www.imf.org/external/pubs/ft/wp/2016/wp1696.pdf</u>.

Tabara, J. D. et al. (2013) Transformative targets in sustainability policy-making: the case of the 30% EU mitigation goal. *Journal of Environmental Planning and Management*, 56(8): 1180 -1191. <u>http://dx.doi.org/10.1080/09640568.2012.716365</u>.

Schütze, F. et al. (2017) The Role of Sustainable Investment in Climate Policy. *Sustainability*, *9*(12), 2221; <u>https://doi.org/10.3390/su9122221</u>

Wolf, S. et al. (2016) Balance or synergies between environment and economy—A note on model structures. *Sustainability*, 8(8), 761. www.mdpi.com/2071-1050/8/8/761

#### Some useful data sources

Eurostat, Statistisches Bundesamt (various data sets)

https://www.ifw-kiel.de/de/publikationen/medieninformationen/2019/deutschekonjunktur-im-sinkflug/

https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-performance-country/france/economic-forecast-france\_en

https://ec.europa.eu/info/sites/info/files/economyfinance/ecfin\_forecast\_spring\_070519\_ea\_eu\_outlook\_en.pdf

https://www.iwkoeln.de/fileadmin/publikationen/2017/345334/Gutachten\_Wirtschaftsfakt or-Immobilien\_2017\_6.pdf

https://www.bpdeurope.com/media/107467/q540\_bpd\_dunefra-2016\_engels-lr-web.pdf

http://bpie.eu/wp-content/uploads/2015/10/Renovation-Strategies-EU-BPIE-2014.pdf

https://www.dena.de/fileadmin/dena/Dokumente/Pdf/9122\_dena-

Sanierungsstudie\_Teil\_1.pdf

https://tyndp.entsoe.eu/Documents/TYNDP%20documents/TYNDP2018/consultation/Main %20Report/TYNDP2018\_Executive%20Report.pdf