



EUROPEAN COMMISSION

Brussels, 14.10.2019
C(2019) 7238 final

<p>In the published version of this decision, some information has been omitted, pursuant to articles 30 and 31 of Council Regulation (EU) 2015/1589 of 13 July 2015 laying down detailed rules for the application of Article 108 of the Treaty on the Functioning of the European Union, concerning non-disclosure of information covered by professional secrecy. The omissions are shown thus [...]</p>		<p style="text-align: center;">PUBLIC VERSION</p> <p>This document is made available for information purposes only.</p>
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Subject: **State aid SA.48556 (2018/N) – Hungary – Regional investment aid to Samsung SDI**

Excellency,

The Commission wishes to inform Hungary that, having examined the information supplied by your authorities on the aid measure referred to above, it has decided to initiate the procedure laid down in Article 108(2) of the Treaty on the Functioning of the European Union ('TFEU').

1. PROCEDURE

- (1) By electronic notification registered on 16 May 2018, the Hungarian authorities notified to the Commission their intention to grant regional investment aid in favour of Samsung SDI Magyarországi Zrt (hereinafter "Samsung SDI").
- (2) By letters of 13 July 2018, 12 September 2018, 13 November 2018, 6 February 2019, and 1 April 2019 the Commission requested supplementary information which was submitted by letters registered at the Commission on 7 September 2018, 14 September 2018, 11 December 2018, 20 December 2018, 8 March 2019, and 31 May 2019. Substantial information was also provided by the Hungarian authorities during a meeting in Göd, Hungary, on 2 July 2018 at the beneficiary's premises. Further information was provided via emails on 25 and 28 January 2019. By letter of 7 December 2018, the Hungarian authorities agreed to have the present decision adopted and notified in the English language and by

Őexcellenciája Péter SZIJJÁRTÓ
Külügyminiszter
Bem rakpart 47
H - 1027 BUDAPEST

letter of 7 May 2019, the Hungarian authorities agreed to an extension of the deadline for the adoption of the present decision until 15 October 2019.

2. DETAILED DESCRIPTION OF THE AID MEASURE

2.1. Objective of the aid measure

- (3) The Hungarian authorities intend to promote regional development by providing regional aid for the extension of the capacity of an existing establishment of Samsung SDI which is producing batteries cells for electric vehicles (hereinafter "EV") in Göd in Central Hungary. Göd is located in an area eligible for regional aid under Art. 107(3)(c) TFEU, with a standard regional aid ceiling of 35% under the Hungarian regional aid map for the period from 2017 to 2020¹ (hereinafter "Regional Aid Map").

2.2. The beneficiary

- (4) The recipient of the aid is Samsung SDI, a fully owned subsidiary of Samsung SDI Co. Ltd. (hereinafter "Samsung SDI Group") which is headquartered in South Korea. The Samsung SDI group is a large undertaking with almost 19 000 employees globally and a turnover of about EUR 4 billion in 2016.
- (5) The Samsung SDI Group is involved in the manufacturing of rechargeable batteries used in the IT industry, EVs, and energy storage systems (ESS). The group is organized in three divisions: the automotive/ESS division, the battery division, and the electronic materials division.
- (6) Apart from Samsung SDI in Hungary, the Samsung SDI Group has three other subsidiaries in the EEA: Samsung SDI Battery Systems GmbH in Austria which is involved in the production and sale of EV battery packs, Samsung SDI Europe GmbH in Germany which offers sales and purchase support for the Samsung SDI Group in Europe, and Novald GmbH in Germany, which manufactures and sells electronic materials.
- (7) In 2016, Samsung SDI set up in Göd, Hungary an EV battery plant (hereinafter "Investment 1") with a maximum capacity of [100 000 – 400 000]^(*) EV battery cells per month which is equivalent to an annual capacity of [0.1-0.5] GWh. This manufacturing facility started trial production in the second quarter of 2017 and mass production in May 2018. No State aid was granted for this investment.
- (8) The Hungarian authorities confirmed that the beneficiary is not a company in difficulty within the meaning of the Guidelines on State aid for rescuing and restructuring non-financial undertakings in difficulty².

¹ SA.46346 (2016/N), OJ C 4 of 06.01.2017.

* *Confidential information*

² OJ C 249, 31.7.2014, p. 1–28.

2.3. The investment project

2.3.1. The notified project

- (9) The investment project concerns the extension of the capacity of the EV battery cell production facility of an existing establishment owned by the beneficiary in Göd (hereinafter "Investment 2"). With the envisaged extension, Samsung SDI's production capacity in Hungary is planned to reach [3.5-8] million battery cells per month in [...], which is equivalent to an annual capacity of [17-20] GWh. Samsung SDI intends to use [50-90] % of this capacity to serve the EEA market and [10-40] % for [...].
- (10) The notified project consists of investments into equipment and machinery relating to the production of battery cells as well as the necessary facilities. Samsung SDI intends to complement the investment into cell production by additional investments into battery modules and battery packs³ production for which no aid will be requested. The investment will be implemented in two phases as described in table 1 below.
- (11) Works on the investment project started on 1 December 2017, after the beneficiary had submitted the relevant aid application to the Hungarian authorities on 13 September 2017. Production started in [...] 2019 and full production should be reached in [...].
- (12) The project is expected to create 1200 new direct jobs.
- (13) The Hungarian authorities consider that the project qualifies as new process innovation in the meaning of paragraph 15 of the Guidelines on regional State aid for 2014-2020 (hereinafter "RAG")⁴ because Samsung SDI intends to develop and manufacture in mass production EV battery cells using significant changes in techniques, equipment and software.
- (14) The aim of Samsung's new process innovations is to decrease the time and costs for manufacturing battery cells. The produced battery cells and some of the input materials used in the production process will be modified as a result of the implementation of the process innovations during both phases of Investment 2.
- (15) In a first phase of the investment, Samsung SDI will produce large metal can prismatic cells with [...] electrodes, similar to the cells produced via the unaided Investment 1 in Hungary. However, changes in the production process steps and to the electrode materials will lead to a significantly improved performance in terms of driving range, speed to charge, and cost per kWh (please see table 1).
- (16) In the second phase of the investment, Samsung will implement a significant innovation in the large format metal can prismatic battery cell structure approach

³ In general, a module consists of multiple cells connected in series and/or parallel, encased in a mechanical structure. A battery pack is assembled by connecting multiple modules together in series or parallel with sensors and controllers including battery management systems and thermal management systems, and then encased in a housing structure as a final battery product designed specifically for each vehicle model.

⁴ OJ C 209, 23.7.2013, p. 1-45.

(i.e. stacking electrodes instead of winding) which, together with further changes in process steps and input materials, will result in further improvements of the performance of the battery cells (please see table 1).

Table 1: Comparison of the main elements of Samsung's investment 1 & 2 in Hungary

	Investment 1	Investment 2 (phase 1)	Investment 2 (phase 2)
Start of mass production	May 2018	2019	[...]
Capacity in GWh	[0.2-0.5]	[17-20] by [...]	
Product characteristics	Large format metal can prismatic battery cells with wound electrodes	Large format metal can prismatic battery cells with [...]	Large format metal can prismatic battery cells with stacked electrodes
- cathode material	[...].	[...]	[...]
- anode material	[...]	[...]	[...]
- separator	[...]	[...]	[...]
- driving range (for a large car)	[200-300] km	[450-600] km	[600-750]km

- (17) The Hungarian authorities further explained that on the EV battery cells market there are three basic distinct cell structures (i.e. prismatic – as the ones produced by Samsung SDI in Göd under Investment 1 -, pouch and cylindrical) and that their underlying production processes are significantly different.
- (18) In general, the battery cell production process consists of three steps:
- In a first step (electrode process), the battery anode and cathode are manufactured. In this process, electrode materials are mixed with a binder material to form a slurry which is then coated on both sides of metallic foils. After coating, the active electrode materials are pressed and dried on the foil. The coated foils are reeled up again after knife slitting.
 - In a second step (cell assembly), the battery cell is assembled by putting together the electrodes and the other components into the cell can.
 - The third and last step (cell formation) consists essentially in at least one complete charge-discharge cycle to transform the working materials into an usable form; it includes also extensive inspection and testing activities.
- (19) For the new production process implemented by Samsung SDI in Göd, the individual process innovations listed below – which cover all three steps described in recital (18) of this decision - are according to Hungary the most relevant ones:
- Electrode process integration integrates [...] core chemical engineering processes into [...] process. This process saves machine costs, reduces processing time and allows a more balanced and uniform mixing of active material.
 - Next-generation electrode coating relates to improvements in [...]. New features allow the achievement of a [...]. This coating technique will simultaneously [...] of Samsung SDI Group's batteries.

- The “stacking” process replaces the winding technology at the heart of the battery with a much more advanced “stacked” assembly method. Fundamentally revising the cell structure has required the Samsung SDI Group to invent a [...] system and [...] technology to create the stacked structure. This technology reduces [...] and therefore increases [...].
- Optimizing the [...] process refers to the development of new equipment to allow [...], and to [...] the cell during the [...] process. These techniques will [...] and will control [...].
- [...] logistics introduces the delivery of materials through a [...] delivery system. This novel design shortens the time necessary to [...], reduces manpower needs, and, most critically, [...] in the factory.
- A new [...] software and sensors increase the operating efficiency of the whole process, and provide the real time generation of [...]. These [...] enable rapid problem analysis and provide guidance on the [...] to solve arising problems.

(20) Hungary explained that some of these novel elements will be protected by patents, but essentially the Samsung SDI Group will protect most of the new production process through blackboxing⁵. The Samsung SDI Group holds one international patent covering a specific item of manufacturing equipment⁶ and has filed a second one⁷. The “stacking” of electrodes, to be introduced by Investment 2, is still under development and testing in [...], but is planned to be applied in mass production in [...].

(21) The Hungarian authorities consider that the mentioned innovative processes and equipments will be introduced in the EV battery and accumulator production sector for the first time. They advance that the elements of the new process constitute the first-time implementation of the innovations world-wide. The Hungarian authorities have provided an expert report signed by [J.C.] [...] the UNIST Future Batteries Research Center⁸. The report confirms the innovativeness of the production process to be introduced under Investment 2. Hungary considers that [J.C.] qualifies as an independent expert, despite it's links with the Samsung SDI Group.

⁵ Blackboxing is an IP protection strategy which prevents disclosure of secret by limiting access to the full information regarding the potential innovation to only a few trusted employees. No patents applications are filed because already the publication of the subject of the invention to be patented is likely to provide ideas to the competitors; furthermore, it is very difficult to prove violations of patent rights regarding process innovations as this requires access to the competitors production lines. Blackboxing means in practice that specific security measures need to be applied, such as prohibiting any recording within the manufacturing facilities, blocking mobile reception within the production facilities, enforcing strict entrance and exit rules, etc.

⁶ Mixer freezing equipment for manufacturing slurry.

⁷ Secondary battery assembly equipment structure optimization (filed on 12 July 2017).

⁸ The Hungarian authorities explained that the UNIST Future Batteries Research Center, which opened in March 2017, is an industry-academia battery research institute belonging to the Ulsan National Institute for Science and Technology, which is a state-run university. The UNIST Future Batteries Research Center carries out joint research activities together with Samsung SDI.

- (22) In conclusion, Hungary considers that the new production process qualifies as a “new process innovation” in the meaning of paragraph 15 of the RAG, as the manufacturing process and equipment are the first time implementation of innovations in the EV cell production.

2.3.2. Eligible investment costs

- (23) The notified total eligible investment costs amount to HUF 380.628 billion, rounded (EUR 1.2 billion⁹) in nominal value, which is HUF 376.540 billion, rounded (EUR 1.187 billion, rounded) in present value¹⁰. The eligible costs result from the cost of buildings, machinery, and equipment.

Table 2: Breakdown of eligible investment costs (nominal and discounted in million HUF, rounded)

<i>million HUF</i>	<i>Nominal/ discounted</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>	<i>2021</i>	<i>Total</i>
<i>Buildings</i>	<i>Nominal</i>	[...]	[...]	[...]	[...]	[...]	[...]
	<i>Discounted</i>	[...]	[...]	[...]	[...]	[...]	[...]
<i>Plant/machinery/ equipment</i>	<i>Nominal</i>	[...]	[...]	[...]	[...]	[...]	[...]
	<i>Discounted</i>	[...]	[...]	[...]	[...]	[...]	[...]
<i>Total</i>	<i>Nominal</i>	[...]	[...]	[...]	[...]	[...]	380 628
	<i>Discounted</i>	[...]	[...]	[...]	[...]	[...]	376 540

Table 3: Breakdown of eligible investment costs (nominal and discounted in million EUR, rounded)

<i>million EUR</i>	<i>Nominal/ discounted</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>	<i>2021</i>	<i>Total</i>
<i>Buildings</i>	<i>Nominal</i>	[...]	[...]	[...]	[...]	[...]	[...]
	<i>Discounted</i>	[...]	[...]	[...]	[...]	[...]	[...]
<i>Plant/machinery/ equipment</i>	<i>Nominal</i>	[...]	[...]	[...]	[...]	[...]	[...]
	<i>Discounted</i>	[...]	[...]	[...]	[...]	[...]	[...]
<i>Total</i>	<i>Nominal</i>	[...]	[...]	[...]	[...]	[...]	1 200
	<i>Discounted</i>	[...]	[...]	[...]	[...]	[...]	1 187

- (24) The Hungarian authorities confirmed that only new assets are accepted as eligible expenditure.

2.4. Form of aid, aid granting authority, and the national legal basis for granting the aid

- (25) The notified financial support is to be given in the form of a non-refundable cash grant and constitutes individually notifiable ad hoc aid which falls outside the scope of exemption of an aid scheme which was put into effect under

⁹ Figures expressed in EUR are given in this decision on the basis of an exchange rate of 317.19 EUR/HUF, applicable on 16 May 2018, which is the date of the notification of the investment project to the Commission.

¹⁰ The present values in this decision are calculated on the basis of a discounting rate of 1.09 % applicable at the time of the notification. Present values are discounted to the year 2018 which represents the year of the notification.

Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty¹¹ (General Block Exemption Regulation, hereinafter "GBER"). Its national legal basis is the Governmental Decree 210/2014 on the use of the earmarked scheme for investment promotion. The aid granting authority is the Hungarian Ministry of Foreign Affairs and Trade.

2.5. Aid amount

- (26) The notified aid is to be awarded in the form of a direct grant and amounts to HUF 34.891 billion, rounded (EUR 110 million, rounded) in nominal value and HUF 34.304 billion, rounded (EUR 108 million, rounded) in present value. The aid was planned to be paid out in annual intallments over 2019-2022 according to the following schedule.

Table 4: Breakdown of aid amount (nominal and discounted in million HUF, rounded)

<i>million HUF</i>	<i>Nominal/ discounted</i>	<i>2019</i>	<i>2020</i>	<i>2021</i>	<i>2022</i>	<i>Total</i>
<i>Grant</i>	<i>Nominal</i>	[...]	[...]	[...]	[...]	[...]
	<i>Discounted</i>	[...]	[...]	[...]	[...]	[...]
<i>Total</i>	<i>Nominal</i>	[...]	[...]	[...]	[...]	34 891
	<i>Discounted</i>	[...]	[...]	[...]	[...]	34 304

Table 5: Breakdown of aid amount (nominal and discounted in million EUR, rounded)

<i>million EUR</i>	<i>Nominal/ discounted</i>	<i>2019</i>	<i>2020</i>	<i>2021</i>	<i>2022</i>	<i>Total</i>
<i>Grant</i>	<i>Nominal</i>	[...]	[...]	[...]	[...]	[...]
	<i>Discounted</i>	[...]	[...]	[...]	[...]	[...]
<i>Total</i>	<i>Nominal</i>	[...]	[...]	[...]	[...]	110
	<i>Discounted</i>	[...]	[...]	[...]	[...]	108

2.6. Aid intensity and cumulation with other investment aid

- (27) On the basis of the total eligible costs of HUF 380.628 billion, rounded (EUR 1.2 billion, rounded) in nominal value, and the expenditure breakdown per year, the Commission has established that the discounted value of the total eligible expenditure is HUF 376.540 billion, rounded (EUR 1.187 billion, rounded). By applying the 35% standard regional aid ceiling for large undertakings in Göd and the scaling-down rules¹² of paragraph 86 and 20(c) of the RAG, the Commission has calculated that the corresponding maximum total aid for the investment project is HUF 49.360 billion, rounded (EUR 155.616 million, rounded) in discounted value, equivalent to a maximum aid intensity of 13.11%.

¹¹ OJ L 187, 26.6.2014, p. 1–78.

¹² The adjusted aid amount means the maximum permissible aid amount for a large investment project, calculated according to the following formula: maximum aid amount = $R \times (50 + 0.50 \times B + 0.34 \times C)$, where R is the maximum aid intensity applicable in the area concerned, excluding the increased aid intensity for SMEs, B is the part of eligible costs between EUR 50 million and EUR 100 million and C is the part of eligible costs above EUR 100 million.

- (28) The envisaged aid of HUF 34.304 billion, rounded (EUR 108 million, rounded) in present value for proposed eligible expenditure of HUF 376.540 billion, rounded (EUR 1.187 billion, rounded) in present value corresponds to an aid intensity of 9.11%, calculated on the basis of the proposed eligible expenditure.
- (29) The Hungarian authorities declare that the financial support for the notified project will not be combined with any other financial support that would be disbursed for the same eligible costs from any other local, regional, national or European Union source.
- (30) The Hungarian authorities confirm that neither the approved maximum aid amount in present value nor the approved aid intensity will be exceeded if the amount of eligible expenditure deviates from the estimated amount.

2.7. Own contribution

- (31) Hungary confirmed that the aid beneficiary will provide a financial contribution of at least 25% of the eligible costs, through its own resources or by external financing, in a form that is exempted of any public financial support.

2.8. Maintenance of the assisted activity

- (32) The direct grant is awarded under the condition that the beneficiary will maintain the investment in the assisted region for a minimum period of five years after its completion.

2.9. Closure of other plants in the EEA and possible relocation

- (33) The beneficiary has confirmed that it has not closed down (at group level) the same or similar activity in the EEA in the two years preceding the aid application and that it does not intend to close down the same or similar activity elsewhere in the EEA in the two years after the completion of the investment.

2.10. Hungarian arguments why the aid contributes to regional development (cohesion) objective

- (34) The Hungarian authorities explained that the investment will contribute to the regional development of the Central-Hungary region. The Pest county, where Göd is located, had in 2016 a GDP per capita of 54% of the EU28 average.
- (35) Hungary claims that the contribution to the development of this region is due to the following:
- The investment creates 1200 direct jobs in an assisted area under Art. 107(3)(c) TFEU, located in the Central-Hungary region. Due to its geographical position, it is likely to attract commuters from neighbouring regions that are assisted areas under Art 107(3)(a) TFEU.
 - The investment will also lead to the creation of indirect jobs: the Hungarian authorities estimate the number of indirect jobs that will be created to exceed 200 in Hungary and additional 300 at the EU level (mainly in the chemical sector, building and civil engineering, machining). Several possible suppliers of materials and equipments are expected to also locate their investments in Hungary. The construction works will also attract more than [30-60] different

construction companies and more than [800-1100] workers are expected to work on the investment project throughout the construction phase.

- The beneficiary plans to offer comprehensive training to improve both the general and specific skills of its workforce. Possible future traineeships and apprenticeships are envisaged as well.
- The beneficiary plans to cooperate with Hungarian higher education institutes, e.g. the Technical University of Budapest and Szent István University of Gödöllő so that knowledge spillover and technology transfers complement the investment project.
- The planned period of economic exploitation of the notified investment exceeds the required minimum 5 years maintenance period; follow-on investments and a considerable R&D&I activity are envisaged in the region concerned.

2.11. Hungarian arguments why the aid is appropriate

- (36) The Hungarian authorities explain that the neediness of the area concerned is confirmed by its status as assisted area under Art. 107(3)(c) TFEU. The Central-Hungary region has benefitted in the past of a multitude of non-aid and horizontal measures which alone proved insufficient to address the regional handicaps of the area. The Pest County, where Göd is located, has remained particularly under-developed compared to the rest of the Central-Hungary region as most foreign direct investments in the region were attracted by the capital, Budapest, which is located 25 km away. In addition, because the maximum allowable aid intensity in the Pest county (at 35%) is lower than in the neighbouring counties (50%), the area of Göd has encountered difficulties in attracting foreign direct investments and in benefitting from EU structural funds. The Hungarian authorities have provided statistical data which show that the GDP of the Central Hungary region has been declining in recent years, relative to the EU-average (i.e. it decreased from 108% of the EU-average in 2013 to 105% in 2015). Furthermore, the GDP of the Pest county in 2016 represented only 80% of the national average and 54% of the EU average. Finally, it is estimated that the contribution of the EU structural funds to GDP growth in the Central-Hungary region is of only 1.4% while the equivalent figure for the other Hungarian regions is 5%.
- (37) The Hungarian authorities remind that according to the Commission's decision practice a direct grant constitutes an appropriate aid instrument to achieve the desired objective, which is to attract the investment to Göd (Hungary).

2.12. Hungarian information as to justification of incentive effect/counterfactual scenario

2.12.1. Formal incentive effect requirement

- (38) Samsung SDI submitted the formal application for aid on 13 September 2017. Works on the investment project started on 1 December 2017, i.e. after the application for aid had been introduced.

2.12.2. Counterfactual scenario

- (39) In the notification, the Hungarian authorities invoke a scenario 2 situation in the meaning of paragraph 61 of the RAG, arguing that without aid, the investment

project would have been implemented in Xi'an (China), where Samsung SDI Group co-owns in a joint venture (hereinafter "JV")¹³ another EV battery cell production facility and sufficient free land to host an extension of the plant. Samsung SDI Group's battery cell plant in Ulsan (South Korea) was excluded as an alternative investment location early in the decision making process due to its - compared to Hungary or China - high labour costs. A greenfield investment was also excluded due to time constraints. In line with the RAG, Hungary provided documents comparing the costs and benefits of locating the investment in Hungary and China. The comparison is done on the basis of the net present value (NPV) of the project, calculated as the difference between the positive and negative cash flows over the lifetime of the investment, discounted to their current value in 2017 using the cost of capital.

- (40) On the basis of these calculations, the Hungarian authorities claim that the Göd site has a net disadvantage of EUR 173 million measured in net present value (NPV) compared to the Xi'an site.

Differences in investment costs

- (41) While in Hungary Samsung SDI would have to bear the full investment costs and would enjoy the benefits of the project entirely, in China, the Samsung SDI Group would share the costs and benefits in proportion to its share (50%) in the ownership of its JV.
- (42) The two counterfactual scenarios presented in the notification documents include similar investments in terms of buildings, machinery, and equipment. In particular, the Hungarian authorities confirmed that the type, capacity, and number of machinery and equipment would be identical in both investment scenarios. Despite this fact, in Hungary, the total capital investment expenditure would be significantly higher than in China (+EUR 215.3 million in present value). While the costs of buildings are slightly lower in Hungary compared to China (-EUR 22.2 million in present value) due to the fact that Samsung could use an existing building for its investment project in Göd, the costs of machinery and equipment would be significantly higher in Hungary compared to China (+EUR 237.5 million) due to a local sourcing policy invoked by Samsung SDI. Hungary claims that this local sourcing policy applies to both investment scenarios and clarifies that machinery and equipment would be bought in the EEA for the Hungarian investment and in China for the Chinese alternative investment. Beyond the initial investment costs, after some years of operation additional capital expenditures are required in order for the machinery and equipment to remain operational. These expenditures are also higher in Hungary compared to China as they are calculated as a percentage of the initial investment costs.
- (43) The Hungarian authorities further explained the methodology for estimating the above-mentioned investment costs. More specifically, Hungary claims that, at the planning stage, Samsung SDI Group did not ask the EEA and Chinese suppliers of machinery and equipment for detailed quotes or price offers because of the risk

¹³ Samsung SDI-ARN Power Battery Co. Ltd (SAPB) was established in 2014 and is a three-party joint venture of Samsung SDI Group, Anging Ring New Group (a Chinese automotive parts supplier) and Xi'an Gaoke Group (a Chinese state-owned company). Samsung SDI Group owns a 50% equity share in the JV.

that confidential information - such as the specifications of the respective equipment - could be disclosed to third parties in the process. Therefore, Samsung SDI Group based its estimations of investment costs for both investment scenarios on market reports which provided country specific unit prices for labour and material costs. The investment costs were calculated relative to the equivalent costs in South Korea, with the result that the machinery and equipment costs in Hungary were estimated to be almost on par with South Korea ([97-102]%) while in China they were much lower than in South Korea ([70-75]%).

- (44) During the course of its preliminary examination, at which time the implementation of the investment project was already well advanced, the Commission asked Hungary to provide proof of the application of Samsung's local sourcing policy in practice, in particular with reference to the suppliers of machinery and equipment. On 7 March and 31 May 2019, the Hungarian authorities confirmed that up to that date – when about [35-50]% of Samsung SDI's investment was ordered with suppliers – Samsung SDI was using no EEA suppliers. Instead, the vast majority of the equipment and machinery acquired for the investment project originated, according to the Hungarian authorities, from South Korea.
- (45) Hungary also explained that in most cases, the machinery/equipment was first purchased from the South Korean producers by the Samsung SDI Group headquartered in South Korea and then the respective equipment was sold to Samsung SDI in Hungary, after applying a [18-22]% markup to the underlying costs basis (which consists of the acquisition price and all other costs incurred by the Group in relation to the purchase, delivery and setting up of the machinery/equipment at the Hungarian investment site). The Hungarian authorities claim that these intra-group transactions resulted in a market price and consider that the [18-22]% markup is justified by market data¹⁴.
- (46) The Hungarian authorities further explained that Samsung SDI Group had to resort to using South Korean suppliers – and disregard its original plans presented in the notification documents – because their search for appropriate local suppliers did not yield the expected results.

Outcome of the search for appropriate local suppliers of machinery and equipment in the Hungarian counterfactual scenario

- (47) According to Hungary, Samsung's search for EEA suppliers started as early as 2015 and was in May 2019 still on-going. Except for bilateral contacts with two EEA producers of equipment in 2015-2016, the search materialized essentially in a conference organized jointly by the Samsung SDI Group and the [...] ¹⁵, which was held on 24 February 2017 in [...] (i.e. 8 months before Samsung's investment decision). According to Hungary, out of 24 conference participants (and 5 other

¹⁴ To support these claims, the Hungarian authorities provided a short benchmarking study analysing the financial data of other companies active in the sector, which concludes that the [18-22]% markup applied by the Samsung SDI Group falls within the markup range applied by these other comparable firms.

¹⁵ [...]

companies which were contacted bilaterally by the Samsung SDI group after the conference), a majority (23) of potential EEA suppliers were dismissed on various grounds¹⁶ before the final decision to invest in Hungary was made on 27 November 2017 (please see paragraph (62) of the present decision). After the investment decision, discussions continued with only 6 potential EEA suppliers which could only provide equipment for a small portion of Samsung's investment in Hungary.

- (48) Hungary further confirmed that for Samsung's first investment (please see paragraph (7) of the present decision), the company had not applied its local sourcing policy either. As the investment concerned a small cell manufacturing line, in order to minimize risks, Samsung decided to depart from its local sourcing policy and to rely instead on experienced South Korean suppliers of machinery and equipment.

Outcome of the search for appropriate local suppliers of machinery and equipment in the Chinese counterfactual scenario

- (49) According to Hungary, in China, the Samsung SDI Group had sufficient experience¹⁷ and contacts with local suppliers and therefore there was no need - in the planning phase of the notified investment - to take specific actions to gather information on their technical capabilities and pricing of standard equipment.
- (50) Hungary also explained that, for the equipment and machinery used to implement the new process innovation, Samsung SDI Group did conduct technical reviews in China from 8 until 12 January 2017, when Samsung SDI Group's engineers visited 5 local equipment manufacturers and held technical meetings with them. The conclusions of these technical reviews was that, while the Chinese producers had made significant technological improvements compared to the situation that existed 2-3 years before and had in the meantime achieved price competitiveness (as they were [5-30]% cheaper than the South Korean suppliers), they did not meet Samsung SDI Group's requirements as regards to [...].

Revenues from the investment

- (51) Hungary argues that the same customers would be served irrespective of whether the EV battery cells are produced in China or in Hungary. The expected revenues are therefore the same for both locations, as equal volumes would be produced and sold for the same prices, to supply the same geographical markets (i.e. the EEA and [...])¹⁸.

¹⁶ Uncompetitive prices and delivery times compared to the Korean suppliers, incompatible or uncompetitive technology, lack of alignment with Samsung SDI Group's procurement strategy, etc.

¹⁷ Given its existing EV battery manufacturing facility in Xi'an (built in 2015 to produce EV batteries).

¹⁸ Samsung's new plant is expected to use [60-90%] of the production capacity to serve the demand of EEA clients whereas [10-40%] is planned to be used to serve the [...] market.

Other economic viability calculations

- (52) The economic viability calculations provided by the Hungarian authorities show that the overall production costs (calculated over a nine year period) would be higher in Hungary than in China.
- (53) The cost disadvantage of Hungary is mainly due to the higher cost of input materials (core materials and components), which is about [5-10]% higher in Hungary compared to China. While core materials are to be sourced from global suppliers at the same price for both locations, the remaining components are expected to be purchased locally, at higher prices in Hungary as compared to China. Inbound transport costs for core materials to Hungary would be higher than to the Chinese location as the core materials are expected to be sourced in China.
- (54) In the first years of operation, the Xi'an plant is assumed to yield superior efficiency due to its longer experience¹⁹ in producing EV batteries. Therefore scrap costs will also be higher in Hungary. In the long run however, these advantages of the Xi'an scenario are expected to diminish.
- (55) Utility costs comprise the cost of electricity, gas, nitrogen and water consumed during the production of EV batteries, with electricity far outweighing the other utility costs. They are about [1-5]% higher in Hungary compared to China.
- (56) Finally, while headcount figures are identical for both locations, the estimated labour costs are about [25-40]% higher in Hungary than in China. The estimated wages are based on actual internal Samsung SDI data from the existing plants in China and Hungary.
- (57) Nevertheless, in certain cost categories, the Hungarian location has substantial quantifiable advantages relative to the Chinese location. In particular, outbound logistic costs in Hungary are about [45-60]% lower than in China due to the proximity of the European customers. Furthermore, in the Chinese counterfactual, the customs tariffs to be paid for final products delivered to the EEA and [...] would be significantly higher than in the Hungarian counterfactual. This is because in the latter case, no import customs would be perceived for deliveries within the EEA.
- (58) A terminal value at the end of the nine-year forecast period was calculated for both locations on the basis of the projected future cash-flows of the projects over a period of [10-20] years. The terminal value estimated in the notification documents is higher in Hungary than in China.
- (59) Finally, a major advantage of the Hungarian scenario consists in the corporate income tax payable in Hungary which is significantly lower than the amount of corporate income tax due in China. This is due to the fact that while Hungary applies a 9% corporate income tax rate, the equivalent in China is 25%. This advantage²⁰ is large enough to offset the net production costs disadvantages

¹⁹ Samsung SDI Group's Xi'an plant started manufacturing operations in October 2015.

²⁰ Combined with the higher depreciation costs and terminal value of the investment in Hungary compared to China.

described in paragraphs (53) to (56) above, as well as part of the claimed investment costs disadvantages of the Hungarian scenario described in paragraph (42).

- (60) On the basis of the above assumptions and a discount rate of [7.7-8.2]% for China and [7.3-7.8]% for Hungary (reflecting slightly different country risks), the Hungarian authorities claim that the Göd site has a total cost disadvantage of EUR 173 million measured in net present value (NPV) compared to the Xi'an site.
- (61) The Hungarian authorities confirmed that an appropriate plot of land suitable for the investment was available in each location.

2.12.3. Hungarian arguments as to the proportionality of the aid

- (62) Hungary explains that the notified aid is to compensate – partially – the claimed cost disadvantage of EUR 173 million in order to attract the investment to the assisted region. The Hungarian authorities confirmed that the Samsung SDI Group is prepared to bear the remaining cost disadvantage of EUR 65 million, as it considers that it will benefit from certain qualitative and strategic factors, such as:
- The geographical proximity of the Hungarian plant to the prospective clients, allowing for just-in-time delivery which will provide Samsung SDI with more flexibility in serving its customers;
 - Easier communication with customers due to time-zone proximity;
 - Membership of Hungary to the European Union which reduces considerably the administrative burden associated with the delivery of EV batteries to clients;
 - Better sustainability of the Hungarian plant due to the availability of green energy for running the manufacturing facility and the higher transparency as regards the source of energy which increasingly constitutes a demand of the clients.

2.12.4. The decision-making process

- (63) The Hungarian authorities explained that investment opportunities in China are analysed by the Samsung SDI Group jointly with their two partners in the JV, but the Samsung SDI Group, which owns 50% of the equity share, has the right to make the final investment decision in the JV.
- (64) Hungary further noted that, according to Samsung SDI Group's decision making policy, investment decisions over EUR [...] million start with an investment initiative from the relevant [...] team". The decision making process with respect to the notified investment project involved several steps:
- (65) In a first step, in May 2017, Samsung SDI's [...] team analysed the dynamics in the market for all types of electric vehicles and forecasted global and regional market demand.
- (66) The process continued in a second step in June 2017, when Samsung SDI [...] team analysed the short-term and long-term sales demand and, together with [...]

team, set up sales targets for the EU and [...] markets, based on the existing and expected orders.

- (67) In a third step, in July 2017, Samsung SDI's [...] team checked the company's production capacity against the sales target and concluded that the company's production capacity was falling [...] short of the sales target for the EU and [...]markets. Therefore, the [...] team calculated the investment amount necessary to add sufficient production capacity to meet the sales target.
- (68) In a forth step, Samsung's [...] committee, supervised by [...], reviewed in a meeting held on 26 October 2017 the prepared materials, including the counterfactual analysis, comparing the two costs and benefits of the possible locations of the investment (X'ian and Göd), where the company already had existing EV batteries manufacturing activities.
- (69) In a final step, [...] of the Samsung SDI Group analyzed the proposal during a meeting held on 27 November 2017 and decided that the investment project should take place in Göd, Hungary on condition that the project would receive the State aid of EUR 108 million.

2.13. General provisions

- (70) The Hungarian authorities confirmed that they will publish on a central website, or on a single website retrieving information from several websites at least the following information on the notified measure: granting authority, individual beneficiary, aid amount, and aid intensity. The information will be published after the granting decision has been taken, will be kept for at least 10 years and will be available for the general public without restrictions.

3. ASSESSMENT OF THE AID MEASURE AND COMPATIBILITY

3.1. Existence of aid

- (71) The financial support will be awarded in the form of a direct grant from the State budget. The support will thus be given by a Member State and through State resources within the meaning of Article 107(1) TFEU.
- (72) As the support is to be granted to a single company, Samsung SDI, the measure is selective.
- (73) The financial support will relieve Samsung SDI from costs which it would normally have to bear itself. Therefore, the company will benefit from an economic advantage over its competitors.
- (74) The measure is likely to affect trade between Member States as it applies to the EV batteries manufacturing sector, where trade between Member States exists.
- (75) As the measure favours Samsung SDI, competition is distorted or threatened to be distorted.
- (76) Consequently, the Commission considers that the measure constitutes State aid within the meaning of Article 107(1) of the TFEU.

3.2. Legality of the aid measure

- (77) If the regional investment aid amount to be granted exceeds the notification threshold laid down in Article 4(1)(a) of the GBER, the aid is not covered by the exemption provided by the same GBER, and has thus to be notified individually to the Commission. In the Göd area, the applicable threshold is EUR 26.25 million. Therefore, the planned aid measure of EUR 108 million cannot be exempted from notification.
- (78) In addition, according to paragraph 15 of the RAG, regional aid to investments of large undertakings in c-areas is considered compatible only if it is granted for initial investments that create new economic activities in these areas, or for the diversification of existing establishments into new products or new process innovations. Aid for these activities is individually notifiable unless it supports initial investments that create new economic activities in these areas. The resulting individual notification obligation for "new products" and "new process innovation" cases applies independently from the aid amount envisaged.
- (79) By notifying the awarding of the aid subject to Commission approval, the Hungarian authorities have respected their obligations under Article 108(3) TFEU.
- (80) The Hungarian authorities confirmed that aid to Samsung SDI will be granted only after the Commission's approval.

3.3. Assessment of the aid measure

- (81) Having established that the notified measure constitutes State aid within the meaning of Article 107(1) TFEU, it is necessary to examine whether the investment project is eligible for aid and whether the measure can be found compatible with the internal market.
- (82) As the objective of the measure is to promote regional development in an area designated in accordance with Article 107(3)(c) TFEU, and the aid is to be granted in the period between 1 July 2014 and 31 December 2020, the basis for its assessment are the RAG.
- (83) In line with the provisions of the RAG, the Commission will first establish whether this investment project, which is to be undertaken by a large undertaking in a c-area²¹, and which does not concern an initial investment in favour of new economic activity in the meaning of paragraph 20(i) of the RAG, can be found eligible for regional aid, as its production process is based on a new process innovation. The Commission will then verify the compatibility of the notified aid in application of the Common Assessment Principles (hereinafter "CAP") laid down in the RAG.

²¹ 'c' areas are areas eligible for regional aid under Article 107(3)(c) TFEU. These are considered disadvantaged areas within the European Union, but to a lesser extent than the 'a' areas, which are eligible for regional aid under Article 107(3)(a) TFEU.

3.3.1. Eligibility of the notified project

- (84) The Hungarian authorities intend to grant aid to an initial investment in the form of an extension of the capacity of an existing establishment of Samsung SDI, a large undertaking, in Göd, an area eligible for regional aid pursuant to Article 107(3)(c) TFEU.
- (85) Paragraph 15 of the RAG reads as follows: "Since regional aid to large undertakings for their investments is unlikely to have an incentive effect, it cannot be regarded to be compatible with the internal market under Article 107(3)(c) of the Treaty, unless it is granted for initial investments that create *new economic activities* in these areas, or for the *diversification of existing establishments into new products or new process innovations*."
- (86) The extension of the capacity of an existing establishment of Samsung SDI constitutes an initial investment in the meaning of the RAG. In fact, an initial investment is defined in paragraph 20(h) RAG as an investment in tangible and intangible assets related to (i) the setting-up of a new establishment, (ii) the extension of the capacity of an existing establishment, (iii) the diversification of the output of an establishment into products not previously produced in the establishment, or (iv) a fundamental change in the overall production process of an existing establishment.²² The expenditure for the capacity extension initial investment is thus, according to paragraph 20(e) of the RAG, and within the limits defined in this paragraph, in principle eligible for regional aid.²³
- (87) However, an initial investment in the form of an extension of the capacity of an existing establishment does not qualify as an initial investment which creates new economic activities. In fact, the notion of initial investment that creates new economic activities is defined according to paragraph 20(i) as follows: (a) an investment in tangible and intangible assets related to (i) the setting up of a new establishment, or (ii) the diversification of the activity of an establishment, under the condition that the new activity is not the same or a similar activity to the activity previously performed in the establishment; or (b) the acquisition of the assets belonging to an establishment that has closed or would have closed if it had not been purchased, and is bought by an investor unrelated to the seller, under the condition that the new activity to be performed using the acquired assets is not a same or similar activity to the activity performed in the establishment prior to the acquisition. The notion of same or similar activity is defined according to paragraph 20(s) as an activity falling under the same class (four-digit numerical code) of the NACE Rev. 2 statistical classification of economic activities.
- (88) Therefore, an extension of the capacity of an existing establishment by a large company in a c-area can only be eligible for regional investment aid if the investment is based on a new process innovation or if it is related to the diversification of existing establishments into a new product. However, the "new

²² According to paragraph 20(h)(b) of the RAG, an initial investment can also be "an acquisition of assets directly linked to an establishment provided the establishment has closed or would have closed if it had not been purchased, and is bought by an investor unrelated to the seller. The sole acquisition of shares of an undertaking does not qualify as an initial investment".

²³ Paragraph 20(e) of the RAG: 'eligible costs' means, for the purpose of investment aid, tangible and intangible assets related to an initial investment or wage costs.

product" window is not applicable for the notified project as the plant is already producing EV battery cells, and as EV batteries cells are a well established product. In the present case the extension of the capacity of an existing establishment can only be considered eligible for regional investment aid if it is based on a new process innovation in the meaning of paragraph 15 of the RAG.

- (89) Therefore, the Commission has to establish whether the envisaged production process which Samsung SDI is introducing in its existing establishment located in the Göd, Hungary qualifies as "new process innovation" in the meaning of paragraph 15 of the RAG.
- (90) The RAG do not provide a definition of the concept of "new process innovations", nor do they lay down precise criteria for the assessment of such types of initial investment cases. The Research and Development and Innovation (RDI) chapter of the GBER sets out a definition for "process innovation"²⁴, which could provide some guidance as to the scope of the concept. This GBER definition is based on the third edition of the Oslo Manual²⁵, developed jointly by Eurostat and the OECD in 2005, which provides guidelines for the collection and interpretation of data on innovation and also offers a widely accepted standard for the definition of innovation, and amongst others, of "process innovation".
- (91) The Oslo Manual and the GBER define a process innovation as "the implementation of a 'new' or 'significantly improved' production or delivery method. This includes significant change in techniques, equipment and/or software." The GBER definition excludes minor changes or improvements, increases in production or service capabilities through the addition of manufacturing or logistical systems which are very similar to those already in use, ceasing to use a process, simple capital replacement or extension, changes resulting purely from changes in factor prices, customisation, localisation, regular, seasonal and other cyclical changes and trading of new or significantly improved products.
- (92) As the RAG require that the eligible investment should not only rely on a "process innovation", but on a "new process innovation" , the Commission considers that only those "process innovations" which have a high degree of novelty should be considered eligible.
- (93) Based on the above, and in line with the precedent decision in the Hamburger Rieger case²⁶, the Commission decides that for an envisaged production process to qualify as a "new process innovation" in the meaning of paragraph 15 of the RAG, it has to represent a substantial (fundamental) change to the state of the art

²⁴ According to Article 2(97) of the GBER 'process innovation' means the implementation of a new or significantly improved production or delivery method (including significant changes in techniques, equipment or software), excluding minor changes or improvements, increases in production or service capabilities through the addition of manufacturing or logistical systems which are very similar to those already in use, ceasing to use a process, simple capital replacement or extension, changes resulting purely from changes in factor prices, customisation, localisation, regular, seasonal and other cyclical changes and trading of new or significantly improved products.

²⁵ http://www.oecd-ilibrary.org/science-and-technology/oslo-manual_9789264013100-en

²⁶ Commission Decision of 13 June 2016 on the aid which Germany is planning to implement for Hamburger Rieger OJ C 323 of 2.9.2016, p.1.

of the relevant production process, and not an incremental or routine improvement. The Commission also takes the view that the eligibility of an investment can only be confirmed if the innovative element is not limited to introducing a punctual improvement, with relevance only for a minor part of the production process, but that the change which the new process innovation introduces to the state of the art, shall have a significant impact on the overall production process. Furthermore the Commission considers that the required novelty of the process innovation is only ensured if the new innovative production process is applied for the first time in the given sector in the EEA.

- (94) The Commission considers that these conditions are met in the notified case for the reasons described below.
- (95) The Commission notes that some of the innovative elements described by the beneficiary will be patent-protected, while most of the remaining elements will be protected by blackboxing.
- (96) In order to assess whether the notified investment project introduces the required high degree of novelty in the respective manufacturing process, the Commission has consulted its own specialised services with expert knowledge in the field of EV batteries, who have confirmed that overall, the changes in the production process to be introduced in the notified project represent a substantial change to the state of the art of the relevant production process, and not an incremental or routine improvement²⁷. More specifically, the Commission considers that the information provided by the beneficiary on the process innovations introduced by Investment 2 shows that significant changes in a number of production steps will be introduced in both phases of the investment, and that these changes qualify as "new process innovation":
- (97) As regards the condition that the envisaged production process should have a significant impact on the overall production process, the Commission considers that this condition is met as the notified investment project carries innovative elements in all three steps of the battery cell production process, as described in recital (18) and (19)(19) of the present decision.
- (98) As regards the "given sector" in which the innovation needs to be established and applied for the first time in the EEA, the Commission notes that, as described in recital (17) of the present decision, on the market for EV Li-ion battery cells there are currently three basic cell structures - prismatic, pouch, and cylindrical cells - and multiple chemistries. Each cell design has its advantages and disadvantages and specific cost structure compared to the others. Because cells of different formats have a different internal structure and require a different assembly approach, also the processes used to manufacture them can be considered as inherently different, with several steps of the manufacturing process being specific to the cell format being manufactured. The Commission also considers that a production process implemented at mass scale differs significantly from a production process implemented at small scale or in trial tests. Therefore, the Commission considers that the "given sector" in the present case is the Li-ion

²⁷ The Commission considers that it would be inadequate to base its assessment on the provided expert report due to close ties between the expert and Samsung SDI Group.

large metal can prismatic battery cells implemented in a mass-scale production process.

- (99) Concerning the requirement that the envisaged process innovation has to be applied for the first time in the given sector in the EEA, the Commission considers that this condition is met as at the end of 2017, i.e. at the time when the application for aid was submitted and investment/location decision was made by the beneficiary. To the knowledge of the Commission, at that time there existed no mass production of Li-ion prismatic batteries, and therefore no application of similar production processes at mass scale, in the EEA. Consequently, the Commission considers that Samsung's Investment 2 (both phases) relies on a production process which constitutes the first time application for mass production in the given segment in the EEA, and thus defines the state of the art in the mass production of large metal can prismatic EV battery cells.
- (100) Taking into account the above, as the new process of the notified investment project (i) represents a substantial change to the state of the art of the relevant production processes, (ii) has a significant impact on the overall production processes and (iii) is a first-time application in the sector within the EEA, the Commission considers that the notified investment project is based on a "new process innovation".
- (101) In conclusion, as the notified investment project qualifies as "new process innovation" and an initial investment in the meaning of RAG, the Commission considers that it is eligible for regional aid, provided all compatibility criteria of the RAG are met.

3.4. Compatibility of the aid measure

- (102) The Commission communication on state aid modernisation²⁸ of 8 May 2012 called for the identification and definition of common principles (hereinafter "CAP") applicable to the assessment of the compatibility of all aid measures. In their section 3, the RAG define and operationalize these CAP for the purposes of regional aid.
- (103) The assessment under the CAP of the RAG takes place in three steps:
- in a first step, it is checked whether minimum requirements regarding credibility of counterfactual scenario, appropriateness, incentive effect, and proportionality of the aid and its contribution to regional development are met (see RAG, sections 3.2-3.6);
 - in a second step, it is verified, that the aid does not lead to manifest negative effects (blacklist) that would prohibit the granting of aid, e.g. aid exceeds the allowable maximum aid intensity ceiling, creates overcapacity in a sector in absolute decline, attracts an investment that would have gone without the aid to another region with a similar or worse off socio-economic situation, or is causal for the closure of activities elsewhere in the EEA (see RAG, section 3.7.2);

²⁸ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions on EU State Aid Modernisation (SAM), COM/2012/0209 final.

- in a third step, for not blacklisted aid projects meeting the minimum requirements, a balancing is carried out to ensure that the contribution to regional development outweighs the negative effects on trade and competition (see RAG, sections 3.7.1 and 3.7.4) .

3.4.1. Minimum requirements

3.4.1.1. Contribution to the regional development objective

- (104) The RAG require the Member State to prove in concrete terms the real and sustained contribution of the aided investment to the regional development of the target region. To help Member States in this task, Section 3.2.2. of the RAG lists a number of indicators that Member States may use in order to demonstrate the regional contribution of individual investment aid notified to the Commission.
- (105) The Göd area is eligible for regional aid pursuant to Article 107(3)(c) of the TFEU. The Commission takes note that Hungary invokes positive regional effects of the investment (see section 2.10 of this decision). At this stage, the Commission does not exclude that the investment contributes to regional development, but is not convinced that this contribution would not take place in any event, even without the aid. In addition, the Commission doubts that the investment will have all the beneficial effects as described in the notification documents as the local sourcing policy announced there does not seem to materialize, at least not for the acquisition of machinery and equipment used in the investment project.
- (106) To prove the real and sustained contribution, the Member State also has to show that the viability of the project is demonstrated by a financial contribution of the aid beneficiary of at least 25% of the eligible costs²⁹, provided through its own resources or by external financing, in a form that is free of any public financial support. In addition, the investment (the aided assets) has to be maintained in the area concerned for a minimum period of five years (three years for SMEs) after completion of the investment³⁰. The Commission notes that the beneficiary will contribute at least 25% of the eligible costs, and commits to keep the investment for five years after completion of the project in the area concerned (see paragraphs (31) and (32) of this decision).
- (107) Based on paragraph (105) of this decision, the Commission has doubts, at this stage of the assessment, as to the contribution of the aid to regional development of the target region and thus to the achievement of a common objective.

3.4.1.2. Need for State intervention

- (108) According to Section 3.3 of the RAG, in order to assess whether State aid is necessary to achieve the objective of common interest, it is necessary to first diagnose the problem to be addressed. State aid should be targeted towards situations where aid can bring about a material improvement that the market cannot deliver itself.

²⁹ See paragraph 38 of the RAG.

³⁰ See paragraph 36 of the RAG.

- (109) As established in paragraph 49 of the RAG, State intervention is considered justified for the development of the areas included in the regional aid map. The Commission notes that Göd is eligible for regional aid pursuant to Article 107(3)(c) TFEU, which is in line with Section 3.3. of the RAG.

3.4.1.3. Appropriateness of regional aid/the aid instrument

- (110) According to paragraph 50 of the RAG, the notified aid measure must be an appropriate policy instrument to address the policy objective concerned; the paragraph underlines that an aid measure will not be considered compatible if other less distortive policy instruments or other less distortive types of aid instruments are available. Section 3.4 of the RAG therefore introduces a double appropriateness test. Under the first appropriateness test, the Member State has in particular to identify the bottlenecks to regional development and the specific handicaps of firms operating in the target region, and to clarify to what extent bottlenecks to regional development could also successfully be targeted by non-aid measures. Under the second appropriateness test, the Member State has to indicate why – in view of the individual merits of the case – the chosen form of regional investment aid is the best instrument to influence the investment or location decision.
- (111) The Hungarian authorities justify (see section 2.11 of this decision) the appropriateness of the aid with the economic situation in the Pest county.
- (112) The Commission notes that the neediness of the Göd area in general is confirmed by its status as a region eligible for regional aid in accordance with Article 107(3)(c) TFEU. The Commission also notes that the concerned area has benefited in the past from the implementation of non-aid and horizontal aid measures and that these have proven to be insufficient to address the regional handicaps, in particular in the Pest county. The Hungarian authorities point out that, as described in paragraph (36) of this decision, in particular the Pest County where Göd is located has remained under-developed, having reached in 2016 a GDP per capita which represented only 80% of the national average and 54% of the EU average. This situation appears to be due, among other factors, to difficulties in attracting investments in the area. In such an economic situation, State aid has been acknowledged by the Commission's case practice as an appropriate means to address the economic shortcomings (e.g. in the *Hamburger Rieger GmbH* decision³¹ and in the *MOL Petrolkémia Zrt* decision³² under the RAG).
- (113) Therefore, the Commission accepts that State aid, and regional investment aid in particular, is an appropriate form of support to achieve the cohesion objective for Göd area.
- (114) The aid is granted in the form of a direct grant. The Commission considers that a direct grant constitutes in principle an appropriate aid instrument to bridge viability gaps. However, the Commission has doubts as to the existence of a real viability gap between the two alternative investment locations (please see

³¹ OJ C 323, 02.09.2016.

³² OJ C 80, 02.03.2018.

paragraph (142) of this decision). Furthermore, the Commission is not convinced that aid in the form of a grant which results in a *prima facie* limited additional contribution to regional development represents an appropriate form of aid to further regional development. Therefore, the Commission raises doubts whether this aid can be declared compatible as it considers that a similar contribution to regional development could possibly be achieved by other more efficient means.

3.4.1.4. Incentive effect

- (115) According to section 3.5 of the RAG, regional aid can only be found compatible with the internal market if it has an incentive effect. An incentive effect is present when the aid changes the behaviour of an undertaking in a way that it engages in additional activity contributing to the development of an area which it would not have engaged in without the aid or would only have engaged in such activity in a restricted or different manner or in another location. The aid must not subsidise the costs of an activity that an undertaking would have incurred in any event and must not compensate for the normal business risk of an economic activity.
- (116) Paragraphs 64-65 of the RAG set out the formal incentive effect requirements, i.e. works on an individual investment can start only after submitting the application form for aid. As the beneficiary applied for aid on 13 September 2017, i.e. before start of works on the investment on 1 December 2017, this condition has been respected.
- (117) As there are many valid reasons for a company to locate its investment in a certain region, even without any aid being granted, the RAG requires the Commission to verify in detail that the aid is necessary to provide a substantive incentive effect for the investment. In this context – as set out in section 3.5.2 of the RAG – the Member State is required to provide a comprehensive description of the counterfactual scenario in which no aid would be granted to the beneficiary. The Commission has to verify that these scenarios are realistic and credible. According to paragraph 68 of the RAG, a counterfactual scenario is credible if it is genuine and relates to the decision-making factors at the time of the decision.
- (118) The RAG (see paragraph 69) requires the Member State to demonstrate to the Commission the existence of the incentive effect of the aid and to provide clear evidence that the aid effectively had an impact on the investment choice or the location choice. It thus places the burden of proof regarding the existence of an incentive effect on the Member State.
- (119) Paragraph 61 of the RAG stipulates that the (substantive) incentive effect can be proven in two possible scenarios: in the absence of aid the investment would not be sufficiently profitable in any location (scenario 1); in the absence of aid the investment would take place in another location (scenario 2).
- (120) The Commission notes that Hungary presents the incentive effect in the context of a scenario 2 situation. The Hungarian authorities justify the aid by invoking a net present value (NPV) viability gap of EUR 173 million compared to an alternative investment location in Xi'an, China where Samsung SDI controls via a joint venture another EV battery production facility. Therefore, it is claimed that the aid of EUR 108 million partly compensates for the net disadvantages and costs of

EUR 173 million linked to the decision to locate the investment in Hungary as compared to China.

- (121) Paragraph 62 of the RAG clarifies that aid that does not “stimulate (additional) investment in the region concerned, ... lacks incentive effect to achieve the regional objective and cannot be approved as compatible with the internal market”.
- (122) Paragraph 71 of the RAG indicates that for scenario 2 – which is invoked by the Hungarian authorities in the present case - the Member State could provide the required proof of the incentive effect of the aid by providing contemporary company documents that show that a comparison has been made between the costs and benefits of locating the investment in the assisted region selected with alternative locations. For that purpose, the Member State is invited by paragraph 72 of the RAG to rely on official board documents, risk assessments, financial reports, internal business plans, expert opinions, other studies and documents that elaborate on various investment scenarios.
- (123) To verify the viability in a scenario 2 context, all relevant costs and revenues³³ have to be taken into account, with the exception of possible subsidies available in the alternative location, where this alternative location is in the EEA.
- (124) The Commission notes that the Hungarian authorities submitted the required information documenting the decision-making process of the beneficiary (at the level of the Samsung SDI Group) concerning the investment and location decision (see section 2.12.4 of this decision). The submitted documents explain the counterfactual scenario which involves two comparable investments and two locations, Göd in Hungary and X'ian in China (located outside of the EEA)³⁴. The documents also show that the investment and location decision was taken after the aid application was submitted to the relevant national authorities.
- (125) At the same time, the Commission notes that the claimed NPV gap of EUR 173 million is explained essentially by a significant difference in planned investment costs of the project in the two alternative locations: whilst the aid beneficiary would invest EUR 1.2 billion in nominal value (EUR 982 million in present value³⁵) into buildings, equipment, and machinery in Hungary, the equivalent costs in China amount to only EUR [...] million in nominal value (EUR 766.7 million in present value). The difference of EUR 215.3 million (in present value) is due exclusively to the cost of machinery and equipment, which is presented in the notification to be almost [35-50]% higher in Hungary compared to China. At the same time, Hungary has a slight advantage compared to China as regards the cost of the buildings due to the availability of the building on the construction site in Göd.

³³ See paragraph 80 of the RAG: The revenues can be neglected if they are the same in both locations.

³⁴ Due to time constraints, the Samsung SDI Group only considered locations where it already had operational EV batteries manufacturing facilities. The only other possible location - Samsung's battery cell plant in Ulsan, South Korea - was excluded early in the decision making process due to its high labour costs when compared to Hungary or China.

³⁵ The present values are discounted to the year 2018 which is the year when the aid was notified to the Commission.

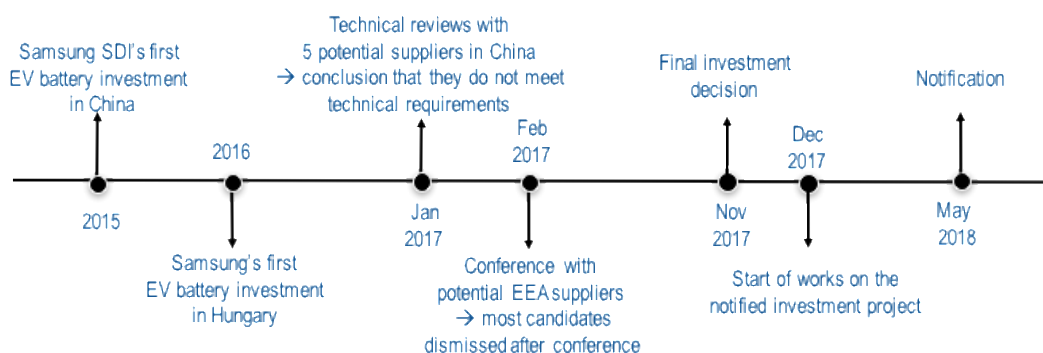
Investment costs (in present value, in million EUR)	China	Hungary	Difference (Hungary-China)
Buildings	[185-225]	[165-205]	-22
Machinery and equipment	[540-580]	[775-815]	237.5
TOTAL	766.7	982.0	215.3

Source: notification documents

- (126) The Commission notes that the EUR 215.3 million difference in investment costs is partially offset by the remaining net advantages of the Hungarian investment (EUR 42.3 million), resulting in a final net viability gap of EUR 173 million between China and Hungary.
- (127) The advantages of the Hungarian scenario consist in a higher terminal value of the investment and a significantly lower payable corporate income tax in Hungary compared to China (9% versus 25%). Furthermore, Hungary has lower outbound logistic costs due to the proximity to the customers and significantly lower custom tariffs paid on the final products delivered to the EEA and [...]. The disadvantages of the Hungarian scenario are represented essentially certain (lower) operating costs in China (in particular raw materials, logistics, and labour). Aside the investment costs, the advantages of the Hungarian scenario outweigh its disadvantages.
- (128) Since the difference in estimated investment costs is substantial and decisive for the claimed NPV gap in favour of the Chinese investment scenario, the Commission considers that its credibility is essential for proving the incentive effect of the aid, i.e. by showing that the aid is necessary to compensate for the net disadvantages and costs of locating the investment in Hungary instead of China.
- (129) In this context, the Commission reminds that it is required – by paragraph 71 of the RAG – to verify that the comparisons of the costs and benefits of the alternative investment scenarios have a realistic basis. Paragraph 68 of the RAG further clarifies that “a counterfactual is credible if it is genuine and relates to the decision-making factors prevalent at the time of the decision by the beneficiary regarding the investment”.
- (130) The Commission notes that the Hungarian authorities justified in the notification documents the significant difference in investment costs for equipment and machinery by invoking Samsung SDI’s local sourcing policy which requires the company to buy from local sources the equipment and machinery and the other inputs necessary for the investment (please see paragraph (42) of the present decision). At the same time, the Commission notes that Samsung SDI has not applied this policy in practice during the time passed from the beginning of the investment project on 1 December 2017 and until 31 May 2019, at least in what concerns the acquisition of equipment and machinery for the investment project under discussion (see paragraph (44) of this decision). Instead, as confirmed by the Hungarian authorities on 8 March and 31 May 2019, Samsung SDI used exclusively South Korean suppliers of machinery and equipment for its

investment in Hungary. The Hungarian authorities further confirmed that the local sourcing policy was also not applied for Samsung's first investment in Hungary (see paragraph (46) of this decision).

- (131) On the basis of the information provided by the Hungarian authorities on 8 March and 31 May 2019 concerning the efforts, outcomes, and timeline of the search for appropriate local suppliers for both counterfactual investment scenarios, the Commission considers at this stage that the claims of local sourcing are unrealistic, and were unrealistic already at the time of the investment decision in November 2017 and the subsequent notification of the investment project to the Commission in May 2018. In particular, the timeline of key events reproduced below indicates that Samsung SDI Group's decision making actors should have been aware, at the time of the final investment decision, that the assumption of local sourcing of equipment/machinery was not realistic, in view of the negative conclusions of the company's search for potential local suppliers in both investment scenarios (please see paragraph (47) to (50) of this decision), which preceded the final investment decision. The Commission considers that a more realistic assumption – for both scenarios – would have been that Samsung would buy the respective equipment and machinery from its experienced and trusted existing suppliers from South Korea, in line with its black-boxing strategy (see footnote 5).



- (132) In such a situation, where machinery and equipment is not sourced locally in either investment scenario but from South Korea for both, the Commission considers that the claimed investment costs differential between Hungary and China of EUR 237.5 million (in present value) – where the costs of machinery and equipment in Hungary are about [35-45]% higher than in China - cannot be justified. Instead, it appears more realistic that the investment cost difference between the two scenarios should be limited to the difference in transport costs for shipping the respective equipment from South Korea to Hungary as compared to China. The Hungarian authorities have estimated, in their submission of 8 March 2019, the shipping costs from South Korea to Hungary at approximately [3-8]% of the respective costs of machinery and equipment, which represents about EUR [35-45] million. Therefore, at this stage of the assessment, and based on the information available to it, the Commission considers that the investment cost difference between Hungary and China cannot be higher than EUR [35-45] million.
- (133) The Commission considers therefore that the viability gap presented by the Hungarian authorities in the notification documents should be recalculated on the basis of the more realistic hypothesis described above. In such a situation, the

calculations in the table below show that the viability gap between the alternative investment locations would be completely wiped out and even reversed, resulting in a small net overall advantage in favour of the Hungarian investment scenario.

Main factors affecting the viability gap (in present value, in million EUR)	Difference (Hungary-China) as presented in the notification documents	Reconstructed difference (Hungary-China)
Investment costs for buildings	-22	-22
Investment costs for machinery and equipment	237.5	[35-45] (maximum)
TOTAL investment costs	215.3	[13-23] (maximum)
Net effect of other factors on Hungary- China viability gap	42.3	42.3
TOTAL viability gap	-173	[20-30]

Note: the Total viability gap is calculated by subtracting the Total investment costs from the Net effect of other factors

- (134) Based on the analysis above, the Commission raises doubts on the credibility of the “local sourcing policy”, the invoked investment costs difference, and the claimed NPV gap of EUR 173 million between China and Hungary, and thus on the incentive effect of the aid of EUR 108 million that the Hungarian authorities intend to grant to Samsung SDI.
- (135) The Commission notes that (as described in paragraph (45) of the present decision) the machinery and equipment used so far for the notified investment project was not purchased directly by the recipient of aid from the actual South Korean suppliers. Instead, the Samsung SDI Group headquartered in South Korea has acted as an intermediary by buying this equipment/machinery in South Korea and selling it to Samsung SDI entity in Hungary, after applying a [18-22]% markup to the underlying costs basis.
- (136) At this stage, on the basis of the information available to it, the Commission cannot confirm that this intragroup transactions results in a market conform price and do not artificially inflate the eligible costs of the Hungarian investment.
- (137) The Commission considers that two further elements might raise doubts as to the credibility of the Chinese investment scenario, namely the potential risk of forced transfer of technology in China and the existing hostile political environment in China towards South Korean investors, at the time of the investment decision.
- (138) With regards to the first factor, the Commission notes that Samsung SDI Group claims that in the absence of aid in Hungary, it would develop a battery cell production plant for EV based on a completely new technological concept allowing production of improved generations of cells, addressing the EEA and [...] markets in a Joint Venture with a Chinese undertaking. The beneficiary

explained [...] in China³⁶. At the same time, it has to be noted that given the particular environment foreign companies have to operate in when producing in China, the risk of forced technology transfer through legal or illegal means cannot be completely ruled out.

- (139) With regards to the second factor, the Commission considers that the state of the political relations between China and South Korea at the time of Samsung's investment decision are also relevant for the assessment of the credibility of the alternative investment scenario. According to various press reports³⁷, it appears that at the time of the investment decision, South Korean EV battery producers in China were facing a particularly hostile economic environment due to political considerations, with the result that they were in practice largely prevented from supplying the Chinese market with their products because the Chinese authorities withdrew subsidies for EV equipped with batteries provided by the South Korean producers.
- (140) In view of the above, at this stage the Commission cannot exclude that the strategic considerations for investing in Hungary (please see paragraph (62) of this decision) combined with the potential risks of forced transfer of technology and the hostile investment climate in China towards South Korean EV battery producers would not have led the company to invest in Hungary even in the presence of the claimed viability gap. A further argument that raises questions as to the credibility of the Chinese counterfactual investment scenario is that it is unlikely that the aid beneficiary would have started a small cell production facility without aid in Göd (Investment 1), if it had not considered ramping up the investment at a later stage. This would imply that the intention to invest and ramp up capacity in Hungary existed already at the time when Investment 1 was pursued in 2016.
- (141) Considering all the factors presented above, the Commission is therefore of the preliminary view that the regional aid was not crucial for a positive location decision in favour of Hungary.
- (142) Therefore, at this stage, the Commission raises has doubts on the credibility of the "local sourcing policy", the invoked investment costs difference, and the claimed NPV gap of EUR 173 million between China and Hungary, and thus on the incentive effect of the aid of EUR 108 million that the Hungarian authorities intend to grant to Samsung SDI.
- (143) In addition, the Commission raises doubts on the credibility of the Chinese counterfactual investment scenario, as it cannot exclude that a combination of factors such as the quickly expanding European market, the proximity to European customers, the risk of forced transfer of technology and the hostile political and economic climate in China, would not have constituted overriding strategic considerations that would have led the company to locate its investment in Hungary in any event, even in the absence of aid. This conclusion is supported

³⁶ [...]

³⁷ https://www.upi.com/Top_News/World-News/2018/05/23/Chinese-cars-with-South-Korean-batteries-turned-down-for-subsidies/3141527092277/

also by the fact that Samsung SDI's first small unaided investment in Hungary in 2016 suggests an intention to ramp up capacity later.

- (144) The Commission calls upon interested parties to comment on the doubts raised on the substantive incentive effect, the credibility of the calculations of the investment costs, the NPV viability gap and on the credibility of the counterfactual investment scenario.

3.4.1.5. Proportionality of the aid amount³⁸

- (145) According to section 3.6 of the RAG, the aid amount must be limited to the minimum needed to induce the additional investment or activity in the area concerned. Therefore the assessment of the proportionality of the aid amount can only be carried out once the incentive effect of the aid is confirmed. As a general rule, notified individual aid will be considered to be limited to the minimum, if the aid amount corresponds to the net extra costs of implementing the investment in the area concerned, compared to the counterfactual in the absence of aid.
- (146) For scenario 2 situations, according to paragraph 106 of the RAG, the Member State must demonstrate the proportionality on the basis of documentation such as that referred to in paragraph 72 of the RAG.
- (147) Pursuant to paragraph 80 of the RAG, in scenario 2 situations (location incentives), the notified aid will be considered to be limited to the minimum, if the aid amount does not exceed the difference between the net present value of the investment in the target area and the net present value in the alternative location, while taking into account all relevant costs and benefits in the NPV calculations.
- (148) The Commission reminds that it had expressed doubts on the credibility of the information submitted for scenario 2 and considers that the NPV gap between the two alternative investment locations is unrealistic, as it is based on the – *prima facie* – unrealistic hypothesis of local sourcing of machinery and equipment. Furthermore, as described in paragraph (133) of this decision, a reconstruction of the viability gap on the basis of the more realistic hypothesis of equipment/machinery being sourced from South Korea for both investment scenarios would result in the viability gap in favour of China being totally wiped and even reversed suggesting a small net overall advantage in favour of the Hungarian investment scenario.
- (149) Therefore, at this stage, the Commission takes the view that the aid would not be proportional as it doubts that the aid is limited to the minimum necessary to trigger the investment location in favour of Hungary. In fact, on the basis of the NPV corrections described in paragraph (133) of this decision, it appears that no aid would be required to attract the investment project to Hungary.

³⁸ See the following section of this decision regarding conformity with the applicable aid intensity ceiling (see paragraph 81 to 86 and paragraph 107 of the RAG).

3.4.1.6. Conclusion as to the respect of the minimum requirements

- (150) Based on its assessment, reflect in recitals (104) to (149) of this decision, the Commission is at this stage unable to confirm that all minimum requirements laid down in sections 3.2 to 3.6 of the RAG, in particular those relating to the contribution to a common objective, appropriateness, incentive effect, and proportionality of the aid are met. The Commission therefore raises doubts as to the compatibility of the aid, in particular with regards to its contribution to a common objective, its appropriateness, its incentive effect, and its proportionality.

3.4.2. Manifest negative effects on competition and trade

- (151) The Commission reminds that the analysis of manifest negative effects is relevant only if Commission finds that the minimum requirements described in paragraph (103) of the present decision are fulfilled. Even if an aid met all minimum requirements, its compatibility could be affected by manifest negative effects on competition and trade, or an insufficient compensation of its negative effects by its positive effects.
- (152) Section 3.7.2 of the RAG explicitly lists a series of situations where the negative effects on trade and/or competition manifestly outweigh any positive effects, and where regional aid is prohibited.

3.4.2.1. Manifest negative effect on trade: The (adjusted) aid intensity ceiling is exceeded

- (153) A manifest negative effect would exist according to paragraph 119 of the RAG where the proposed aid amount exceeds, compared to the eligible (standardised) investment expenditure³⁹, the maximum (adjusted) aid intensity ceiling that applies for a project of the given size, taking into account the required "progressive scaling down"⁴⁰.
- (154) The applicable regional aid ceiling in the Göd area is 35%. In view of the expected higher distortion of competition and trade, the maximum aid intensity for large investment projects must be scaled down using the mechanism as per paragraph 20(c) of the RAG. The planned total eligible expenditure in present value for the notified investment project is HUF 376.540 billion, rounded (EUR 1.187 billion, rounded). In application of the scaling down mechanism of paragraph 20(c), this leads to a maximum allowable aid intensity of 13.11% Gross Grant Equivalent (GGE) for the project. The notified aid intensity of 9.11% in this case is thus not higher than the regional aid ceilings corrected by the scaling-down mechanism.
- (155) Sections 3.6.1.1 and 3.6.1.2 of the RAG explain which investment costs can be taken into account as eligible costs⁴¹. In the present case, section 3.6.1.1 applies as the eligible costs for the proposed investment aid are calculated on the basis of

³⁹ The standardised eligible expenditure for investment projects by large firms is described in detail in section 3.6.1.1 and 3.6.1.2 of the RAG 2014-20.

⁴⁰ See paragraph 86 and 20(c) of the RAG.

⁴¹ Pursuant to paragraph 20(e) of the RAG, eligible costs means for the purpose of investment aid, tangible and intangible assets related to an initial investment or wage costs.

investment costs. The Commission notes that the eligible costs are established in line with the provisions of this section as the acquired assets will be new⁴², the investment concerns an initial investment in the form of a capacity extension⁴³, and no leasing costs⁴⁴ and no immaterial assets⁴⁵ are taken into account.

- (156) Thus, the Commission notes that the eligible costs are established in accordance with the RAG.
- (157) As the aid intensity does not exceed the maximum allowable and is applied to eligible expenditure established in line with the relevant rules, and as the notification excludes the combination of the notified aid with other aid, the basic requirement identified in paragraphs 107 and 119 of the RAG that the maximum aid intensities are not exceeded, is met.

3.4.2.2. Manifest negative effect on competition: The aid creates overcapacity in a market in absolute decline

- (158) According to paragraph 120 of the RAG, a manifest negative effect arises also where the investment aid creates capacity in a market in absolute decline, as such aid is likely to crowd out competitors, or to prevent low cost firms from entering, and risks weakening incentives for competitors to innovate. This results in inefficient market structures which are also harmful to consumers in the long run.
- (159) Prima facie, the Commission has doubts as to whether the aid has incentive effect at all. If the aid has no incentive effect, it cannot lead to overcapacity, as the investment would have happened in any event.
- (160) If the aid had incentive effect and was limited to the minimum necessary, this verification stipulated in paragraph 120 of the RAG would be necessary only where additional capacity is created on the relevant geographic market by the aid. Where the investment would have happened in any event ("scenario 2") in the same geographical market, the aid – provided it is limited to the minimum necessary to change the location decision - influences only the location decision, and additional capacity would have come on the relevant geographic market independent of it. Therefore, this verification will normally be required only in Scenario 1 situations⁴⁶ or in those Scenario 2 situations where the alternative locations (i.e. the target region and the more viable region for the implementation of the project) are located in different geographic markets.
- (161) In order to determine whether this verification is necessary in the case at hand, the Commission has to assess and establish whether the two alternative locations are situated in different geographical markets. If the locations under consideration are

⁴² See RAG, paragraph 94.

⁴³ Therefore the specific conditions applicable for initial investments in the form of a fundamental change of the production process of an existing establishment (see paragraph 96 of the RAG), of the diversification of an existing establishment (see paragraph 97 of the RAG), or the takeover of the assets of an establishment (see paragraph 99 of the RAG) do not apply.

⁴⁴ See paragraph 98 of the RAG.

⁴⁵ See paragraph 100 of the RAG.

⁴⁶ See paragraph 120 of the RAG.

in fact situated in different geographical markets, or if the Commission leaves the question open whether the two locations are situated on the same or different geographical markets, the "overcapacity in a declining market" test needs to be carried out.

- (162) To verify whether the investment addresses a market in absolute decline – if the test is necessary - the relevant product and geographic market needs to be defined. A market is in absolute decline⁴⁷ if it shows over an appropriate reference period a negative growth rate. The average growth rate of the market concerned (apparent consumption data or sales data) is normally measured over the last three years before the start of the project or on the basis of projected growth rate in the coming three to five years.

Product concerned

- (163) The product concerned is normally the product covered by the investment project. However, when the project concerns an intermediate product and a significant part of the output is not sold on the market, the product concerned may be the downstream product.
- (164) In the case at hand, the Commission considers that the product covered by the investment project are the battery cells. These can be either sold directly to car makers, or be first assembled into battery modules and possibly also battery packs, and then sold to the car makers.
- (165) Given that it is the customers who decide whether Samsung SDI should supply them with battery cells or modules or packs, and given that battery cell production constitutes the most substantial part of the value added of the final product, it appears reasonable to focus on the market of battery cells only. In any event, the market for battery cells is an appropriate proxy for the downstream products of battery modules and battery packs that follow the same market trends.
- (166) Therefore, the Commission considers that the battery cells represent the product concerned by the investment, and will assess the competition effects of the aid at the level of the market for battery cells. The Commission adopted the same approach also in its decision on SA.47662 in the LG CHEM case.

Relevant product market

- (167) The Hungarian authorities explained that besides the application in the automotive industry (for electric vehicles), Li-ion battery cells can find other uses, most notably in battery energy storage systems (ESS). Battery cells for energy storage systems (ESS) can be generally manufactured, at little additional costs, in the same facility as the cells for the automotive segment, thus the capacity Samsung SDI intends to install in Hungary could be used to supply cells for the ESS market as well. However, the Hungarian authorities explained that

⁴⁷ It might also be necessary to verify whether an absolute decline is not hidden behind the effects of business cycle effects on the product market concerned, or caused by other exceptional effects that would bias the results of the standard approach. Constantly sinking product prices might be an indicator for a situation of absolute decline, or simply the result of substantial and continuous technical progress allowing to reduce per unit production costs.

Samsung SDI has no specific plans to this effect. The Commission notes that Samsung SDI has provided a commitment to sell a minimum of [93-96] % of the cells (that will be manufactured using the new capacities installed as a result of the implementation of the notified investment project) for automotive use exclusively, during a period of minimum 5 years after the completion of the investment project. Therefore, the Commission considers for the purpose of the state aid assessment for this decision that the relevant product market is the market for battery cells for electric vehicles (measured in GWh).

- (168) On this basis, the Commission verified whether the aid creates overcapacity in a market in absolute decline in this particular market.

Relevant geographic market

- (169) The Hungarian authorities submit that the relevant geographic market is global. Although Samsung SDI had, at the moment of the investment decision, orders only from European car makers, the beneficiary's goal was to serve also the [...] market. Furthermore, the products can be easily shipped, which constitutes an additional argument militating in favour of a global geographical market.
- (170) For the purpose of the present decision, the Commission decided to leave the question of the exact definition of the geographic market open, and to proceed with the assessment of two plausible markets, the EEA market and the global market.⁴⁸ Thus, the Commission has to verify whether the aid creates overcapacity in a market in absolute decline at the level of the market for EV battery cells of the EEA, and at global level.

Testing whether the aid creates overcapacity in a market in absolute decline

- (171) The Hungarian authorities submit that the project will be carried out in a highly innovative and rapidly growing market, both in the EEA and globally.
- (172) On the basis of a report by the IHS⁴⁹, the Hungarian authorities argue that the global demand for EV batteries (measured in terms of total battery capacity) will increase almost threefold from 2019 to 2023. The same report presents similar exponential growth prospects for the EU market, which is expected to grow fourfold during the same period.
- (173) Therefore, the Commission concludes that – whatever the definition of the geographic market - the aid does not contribute to or reinforces the creation of overcapacity in a market in absolute decline, thus it does not have a manifest negative effect on competition⁵⁰.

⁴⁸ In fact, a definite definition of the geographic market is not necessary in the given case in view of the general evolution of the global and the EEA market for battery cells for EV use.

⁴⁹ Information Handling Services (IHS) light vehicle production database and forecast

⁵⁰ The market for battery cells for ESS shows also substantive growth, both at EEA and global level, both in value and in terms of installed ESS capacity. Therefore, a wider definition of the product market, to include cells for EV and ESS, would lead to the same result that the market is not in absolute or relative decline, and thus that the aid – independent of the definition of the geographic market as EEA or global market, has no undue negative effect on competition.

3.4.2.3. Manifest negative effect on trade: Counter-cohesion effect

- (174) Paragraph 121 of the RAG prohibits an EEA region with a lower project-specific viability to participate in "subsidy races" to the detriment of equally weak or worse-off regions.⁵¹
- (175) The Hungarian authorities consider that the aid beneficiary considered only one other alternative location for the investment project, namely X'ian in China, which is not in the EEA. Since the existence of an operational EV battery cells manufacturing facility represented a pre-condition for the investment site selection, and given that Samsung does not have any other EV battery cells manufacturing sites in the EEA, no other area in the EEA was considered as a feasible location (see also recital (39) of the present decision).
- (176) Therefore, the Commission accepts that the aid does not risk to have a counter-cohesion effect.

3.4.2.4. Manifest negative effect on trade: Closure of activities elsewhere/relocation

- (177) Pursuant to paragraph 122 of the RAG, where the beneficiary has concrete plans to close down or actually closes down the same or a similar activity in another area in the EEA and relocates that activity to the target area, if there is a causal link between the aid and the relocation, this will constitute a negative effect that is unlikely to be compensated by any positive elements.
- (178) The Hungarian authorities and the aid beneficiary declared (please see paragraph (33) of the present decision) that the beneficiary at group level has not closed down the same or similar activity in the EEA in the two years preceding the application for aid, and does not have any concrete plans to do so within two years after completion of the investment.
- (179) At the same time, the Commission notes that this commitment appears to be put into question by press reports⁵² which suggest that the Samsung Group is reorganizing its activities in the EU, resulting – among others – in the relocation of the battery packs production activities of Samsung's subsidiary located in Austria to Hungary, and a loss of 100 jobs in the respective Austrian subsidiary.
- (180) In view of the above, the Commission cannot exclude at this stage that the aid for investments into EV cell production in Göd (which is accompanied by additional not-aided downstream investments into battery modules and battery packs (see paragraph (10) of this decision) is not at least indirectly causal for any closure or relocation of the same or similar activity within the EEA and therefore may have a manifest negative effect on trade within the meaning of paragraph 122 of the RAG.

⁵¹ According to paragraph 121 of the RAG, the counter-cohesion effect resulting from aid to the detriment of a weaker or similarly weak EEA region would constitute a negative element in the overall balancing test that is unlikely to be compensated by any positive elements, because it runs counter the very rationale of regional aid.

⁵² https://www.kleinezeitung.at/wirtschaft/5591081/Batterieproduktion_Samsung-SDI_Trotz-Millioneninvestition-werden#

3.4.2.5. Conclusion as to the existence of manifest negative effects on competition and trade

- (181) In light of the assessment in recitals (151) to (180) of this decision, the Commission concludes at this stage that it cannot exclude that the aid has no manifest negative effect on competition or trade in the meaning of section 3.7.2 of the RAG as the Commission could not exclude that the measure may have a manifest negative effect on trade between Member States.

3.4.3. Balancing of positive and negative effects of the aid

- (182) Paragraph 112 of the RAG lays down the following: "For the aid to be compatible, the negative effects of the measure in terms of distortion of competition and impact on trade between Member states must be limited and outweighed by the positive effects in terms of contribution to the objective of common interest. Certain situations can be identified where the negative effects manifestly outweigh any positive effects, meaning that aid cannot be found compatible with the internal market."
- (183) As explained in recital (150), the Commission cannot conclude at this point that the notified regional aid measure satisfies the minimum requirements of the RAG in view of the doubts expressed in connection with the contribution to regional development, appropriateness of the aid, the incentive effect and proportionality.
- (184) Furthermore, even if the measure was to meet these minimum requirements of the RAG, if the measure has manifest negative effect on competition and trade as pointed out in paragraph (181), the aid cannot be found compatible with the internal market.
- (185) In light of these considerations, the Commission raises doubts as to whether the positive effects of the aid outweigh their negative effects.

3.4.4. Transparency

- (186) In view of para.II.2 of the Transparency Communication from the Commission⁵³ Member States must ensure the publication on a comprehensive State aid website, at national or regional level, of a full text of the approved aid scheme or the individual aid granting decision and its implementing provisions, or a link to it; the identity of the granting authority or authorities; the identity of the individual beneficiaries, the form and amount of aid granted to each beneficiary, the date of granting, the type of undertaking (SME/large company), the region in which the beneficiary is located (at NUTS level II) and the principal economic sector in which the beneficiary has its activities (at NACE group level). Such information must be published after the decision to grant the aid has been taken, must be kept for at least ten years and must be available to the general public without

⁵³ Communication from the Commission amending the Communications from the Commission on EU Guidelines for the application of State aid rules in relation to the rapid deployment of broadband networks, on Guidelines on regional State aid for 2014-2020, on State aid for films and other audiovisual works, on Guidelines on State aid to promote risk finance investments and on Guidelines on State aid to airports and airlines, OJ C 198, 27.6.2014, p. 30.

restrictions. Member States are not required to publish the above-mentioned information before 1 July 2016.

- (187) The Commission notes that the Hungarian authorities confirmed that all requirements concerning transparency set out in para.II.2 of the Transparency Communication will be respected.

3.5. Doubts and grounds for opening

- (188) For the reasons set out above (see paragraphs (104) to (185) of this decision), the Commission, after a preliminary assessment of the measure, has doubts as to the conformity of the measure with the provisions of the RAG concerning the appropriateness, the incentive effect, and the proportionality of the aid, as well as its contribution to a common objective. In addition, the Commission notes that it cannot be excluded that the aid is causal for the relocation of activities from another Member State, which would constitute a manifest negative effect on trade. For all these reasons, the Commission raises doubts as to the compatibility of the notified aid measure with the internal market.
- (189) Consequently, the Commission is under duty to carry out all the required consultations and, therefore, to initiate the procedure under Article 108(2) of the TFEU. This will give the opportunity to third parties whose interests may be affected by the granting of aid to comment on the measure. In light of both the information submitted by the member State concerned and that provided by third parties, the Commission will assess the measure and will take its final decision.
- (190) The Member State and interested parties are invited to provide their comments to the opening decision all information necessary to carry out this formal investigation.
- (191) On the basis of the information submitted concerning the above mentioned factors, the Commission will perform a balancing exercise of the positive and the negative effects of the aid. The overall assessment of the impact of the aid will allow the Commission to take a final decision and close the formal investigation procedure.
- (192) In the light of the foregoing considerations, the Commission, acting under the procedure laid down in Article 108(2) of the Treaty on the Functioning of the European Union, requests Hungary to submit its comments and to provide all such information as may help to assess the aid, within one month from the date of receipt of this letter. It requests your authorities to forward a copy of this letter to the potential recipient of the aid immediately.
- (193) The Commission wishes to remind Hungary that Article 108(3) of the Treaty on the Functioning of the European Union has suspensory effect, and would draw your attention to Article 14 of the Council Regulation (EC) No 659/1999, which provides that all unlawful aid may be recovered from the recipient.
- (194) The Commission warns Hungary that it will inform interested parties by publishing this letter and a meaningful summary of it in the Official Journal of the European Union. It will also inform interested parties in the EFTA countries which are signatories to the EEA Agreement, by publication of a notice in the EEA Supplement to the Official Journal of the European Union and will inform

the EFTA Surveillance Authority by sending a copy of this letter. All such interested parties will be invited to submit their comments within one month of the date of such publication.

(195) Finally, the Commission notes that Hungary exceptionally agreed to have the present decision adopted in the English language.

If this letter contains confidential information, which should not be disclosed to third parties, please inform the Commission within fifteen working days of the date of receipt. If the Commission does not receive a reasoned request by that deadline, you will be deemed to agree to the disclosure to third parties and to the publication of the full text of the letter in the authentic language on the Internet site:

<http://ec.europa.eu/competition/elojade/isef/index.cfm>.

Your request should be sent by registered letter or fax to:

European Commission
Directorate-General for Competition
State Aid Greffe
B – 1049 Brussels
Fax No: 32 2 296 12 42

Yours faithfully,

For the Commission

Margrethe Vestager
Member of the Commission