

## Government Decision #4442 of 06.01.2019

### **4442 The Adoption of the Main Recommendations of the Professional Team for the Periodic Examination of the Recommendations of the Committee on Examining the Government's Policy in Israel's Natural Gas Market and the amendment of Government Decision**

#### **Resolved**

In order to encourage the development of the natural gas market in Israel, and in particular the development of small and medium size reservoirs, and following the deeds of lease that were granted and without derogating from the powers of the Minister of Energy by any law, without derogating from Government Decision 4080 of 29<sup>th</sup> July 2018 regarding the shutdown of electricity generation units 1-4 at the "Orot Rabin" power station; and further to Government Decision 442 of 23.6.2013 regarding the "adoption of the main recommendations of the committee on examining the government's policy in the natural gas market (the Zemach Committee report) (hereinafter: **Government Decision 442**), as amended in Government Decision 476 of 15.8.2015 regarding "the framework for increasing the amount of natural gas produced from the Tamar field and the rapid development of the Leviathan, Karish, Tanin and additional natural gas fields"; Government Decision 1465 of 22.5.2016 regarding "the amendment to the framework for increasing the amount of natural gas produced from the Tamar field and the rapid development of the Leviathan, Karish, Tanin and additional natural gas fields"; and Government Decision 2592 of 2.4.2017 regarding "encouraging small and medium size reservoirs and declaring a state of emergency in the natural gas market" (hereinafter: Government Decision 2592):

To adopt the main recommendations of the professional team that was appointed by the Director General of the Ministry of Energy on 4.1.2018 in accordance with Clause 1(i) of Government Decision 442 for the periodic examination of Clause 1 of Government Decision 442 (hereinafter: the professional team) as they appear in the final report of the professional team dated 18.12.2018, as specified below

As detailed below:

1. To update Clauses 1(a) and 1(b) of Government Decision 442 regarding the discoveries that will be recognized as of the date of this government decision and thereafter, so that the amount of natural gas reserved for the domestic market over the next 25 years will be a volume of 500 BCM, which will enable to meet the demands for natural gas for the energy needs of the domestic market during this period; this, after examining the needs of the domestic market, including in

aspects of daily and hourly supply and in view of the amount of natural gas. In this clause, “the amount of natural gas” – is the amount of natural gas according to PRMS categories 2C and 2P combined in the discoveries approved by the Petroleum Commissioner (hereinafter: **the Commissioner**), for which leases were granted and whose connection to shore was completed pursuant to the development plan in a manner enabling their supply to the Israeli market.

2. The government duly notes the professional team’s position by which in order to ensure redundancy in the domestic market, the team decided not to recommend the cancellation of the agreement with the regasification vessel connected to the offshore buoy for receipt of natural gas from LNG carriers (“the buoy”) (the agreement is currently valid until 2022).

Further to this, to task the Director of the Natural Gas Authority with examining in 2021 whether the market has redundancy that allows for meeting the maximum hourly demand in the market and to submit his recommendation to the Minister of Energy by 31.12.2021, prior to making a decision on the renewal or non-renewal of the agreement.

3. To task the Minister of Energy, in consultation with the Minister of Finance and the Minister of Economy, with formulating the necessary principles of regulation regarding the sale of natural gas to consumers in the domestic market which is used to produce by-products from natural gas that are designated mainly for exports, and to submit his recommendations to the government within 120 days; and to task the Minister of Energy with initiating regulatory amendments, including legislative amendments, if required, based on said recommendations.
4. To task the Minister of Energy, in consultation with the Minister of Finance, with initiating regulatory amendments, including legislative amendments if required, regarding secondary trading of natural gas that could be directed to exports. Including, to task the Minister of Energy, in consultation with the Minister of Finance, to ensure that said regulatory amendments guarantees that secondary trading of natural gas that could be directed to exports will be limited to 3% of the total sales of natural gas to the Israeli market during the past year. This amount will not be counted in the calculation of the total amount guaranteed to the domestic market, but will be counted as part of a natural gas field’s obligation of minimum supply to the domestic market; this amount will not require an export approval.
5. To determine in lieu of Clause 1(c) of Government Decision 442, and further to Clause 14 of Government Decision 2592 regarding discoveries that will be recognized from the date of the approval of this decision and thereafter, that the obligation of a gas field to connect to the domestic market will be based on the size of each field as follows:

- a. Natural gas fields which contain more than 200 BCM must connect to the domestic market upon development, and prior to the date of commercial gas flow.
- b. Natural gas fields which contain more than 50 but not more than 200 BCM and begin commercial production of natural gas before 1.1.2028, must connect to the domestic market by 31.12.2032. A postponement of the obligation to connect to the domestic market beyond 31.12.2032 will be at the discretion of the Commissioner, who will consider for this purpose the state of redundancy and amount of natural gas reserves connected to the domestic market and issue his decision as close as possible to the date of the approval of the discovery and will take into consideration the assurance of meeting the hourly and daily demand for natural gas in the domestic market. Fields in this category which begin commercial production of natural gas after 1.1.2028 must connect to the domestic market upon development, and prior to the date of commercial gas flow.
- c. Natural gas fields which contain up to 50 BCM are not required to connect to the domestic market, and this is in order to encourage their development.

The amount of natural gas in a field with regard to the obligation to connect to the domestic market will be based on PRMS categories 2C and 2P combined, and will be determined by the Commissioner as close as possible to the date of the approval of the discovery in the field. The amount will be calculated in aggregate for fields that produce using a single production system and in addition at least two of the leases in which these fields are located have the same party approved as the operator or that holds more than 50% of the rights. The Commissioner may, in an explained decision, decide not to calculate the amount of natural gas in the fields in aggregate.

6. In order to encourage the connection of additional fields to the domestic market, to task the Commissioner, the Director of the Natural Gas Authority and the Director of Budgets at the Ministry of Finance, with examining the state's participation in the construction of an additional offshore system in the southern polygon approved in National Outline Plan (TAMA) 37/H which includes an offshore receiving terminal and its connection to shore, insofar as the Commissioner has concluded that exploration activities have developed in the southern maritime zone of Israel.

In addition to the aforementioned, to task the Commissioner with examining additional means for encouraging the maximization of the potential economic benefits of natural gas fields, including encouraging the connection to the domestic market of fields that are not required to connect to the domestic market or that received a postponement of the obligation to connect as detailed above.

7. Further to Clause 1(h) of Government Decision 442, to determine that with regard to discoveries that will be recognized starting with the date of the approval of this decision and thereafter, the obligation of minimal supply to the domestic market will be in proportion to the size of the field. In this matter, the amount of natural gas in each field will be based on PRMS categories 2C and 2P combined, and will be determined by the Commissioner as close as possible to the date of the approval of the discovery in the field and calculated according to the incremental amount as follows:
- Fields that contain, as determined by the Commissioner, less than 50 BCM of natural gas will not be obligated to supply to the domestic market.
  - For each additional 1 BCM of natural gas from 50 BCM and up to 200 BCM – an obligation of supply to the domestic market of 50% of this amount.
  - For each additional 1 BCM of natural gas from 200 BCM and above – an obligation of supply to the domestic market of 55% of this amount.
8. This decision will be reviewed by the government five years after its approval for the purpose of making revisions, if required, to the policy on the discoveries that will be recognized by the Commissioner five years after the approval of the decision, according to the needs of the domestic market and in view of the supply of natural gas.

A copy of the team's recommendations is available in the files of the Government Secretariat and on the following website:

[https://www.gov.il/BlobFolder/reports/periodic\\_examination/he/ng\\_dec\\_18.pdf](https://www.gov.il/BlobFolder/reports/periodic_examination/he/ng_dec_18.pdf)

## Explanatory Notes

### General Background

On October 2 2011, the Prime Minister and then-Minister of National Infrastructure (today the Ministry of Energy) Dr. Uzi Landau appointed an inter-ministerial committee to examine the government's policy in the Israeli natural gas market, chaired by then-Director General of the Ministry of National Infrastructure Mr. Shaul Zemach ("**the Zemach Committee**"). The committee's members included representatives from the Budgets Department of the Ministry of Finance, the Antitrust Authority, the Ministry of Environmental Protection, the National Economic Council, the National Security Council, the Ministry of Foreign Affairs and the Ministry of Justice. The committee was established following the large gas discoveries of "Tamar" and "Leviathan" in Israel's Exclusive Economic Zone, which significantly increased Israel's natural gas reserves within a short period.

The committee's letter of appointment tasked its members with examining the policy pursued in natural gas markets in the world for the purpose of learning from international experience, as well as carrying out a domestic supply-demand analysis and to accordingly recommend to the Government of Israel a government policy for developing the natural gas market in Israel while taking into account the unique characteristics of the market and combining between the needs of the domestic energy market and economic, environmental and political goals.

The recommendations of the Zemach Committee were published on August 29 2012, and were anchored in Government Decision 442 of June 23 2013 with certain changes.

The deeds of lease that were granted also anchor these provisions and the powers of the Minister of Energy, inter alia in accordance with Section 33 of the Petroleum Law. It is hereby clarified that this decision does not derogate from the powers of the Minister in accordance with Section 33.

In light of the provisions of Clause 1(i) of Government Decision 442 regarding the examination of the provisions of the decision five years after its approval, on 4.1.2018 the Director General of the Ministry of Energy Mr. Udi Adiri appointed a professional team comprising representatives from the ministries and authorities that took part in the deliberations of the Zemach Committee. The professional team was appointed to examine the provisions of Clause 1 of Government Decision 442, and in particular the implementation of the obligation to connect natural gas fields to the domestic market as stipulated by Government Decision 2592 of 2.4.2017, for the purpose of encouraging small and medium size reservoirs.

Between January-May 2018 the professional team convened several meetings in which its members were presented with summaries of the present factual situation as of 2018 in terms of the supply of natural gas, energy security and redundancy of supply, data on natural gas consumption between 2013-2017, and updated demand forecasts for a range of 25 years – until 2042, including the issue of maximum hourly demand. The

professional team focused on examining the supply and demand of natural gas, and to that end discussed the amount of natural gas to be reserved for the domestic market, the obligation to connect to the domestic market and the rate of supply to the domestic market each field is obligated to according to its size.

On 16.7.2018 the professional team published its interim report on the Ministry of Energy's website for public comments. During the publication period, comments were submitted by various stakeholders such as right holders, public non-profit organizations, economic consulting firms and residents. The professional team reviewed these comments and some were assimilated into the professional team's final report.

On 18.12.2018, the professional team published its final report on the Ministry of Energy's website in the following link:

[https://www.gov.il/he/Departments/publications/reports/periodic\\_examination](https://www.gov.il/he/Departments/publications/reports/periodic_examination)

The professional team was presented with the state of natural gas exploration and production as of 2018. The team learnt that in 2012, when the Zemach Committee had deliberated, Israel's maritime zones contained 36 licenses and 4 leases and the outlook was for a continued and significant development of the exploration and production segment offshore Israel. In practice, between 2013-2018 drillings were not carried out in most licenses. In fact, since 2012 only two exploration wells have been drilled offshore Israel, both in 2013. As of the date of the preparation of the report (December 2018), there are 8 licenses and 10 leases offshore Israel.

In addition, in 2012 only two fields were connected to the domestic market, Noa and Mari-B, via a single production system which produced 4 BCM during the peak year (2011) and negligible amounts of natural gas were produced in 2012. At present, in addition to these two fields, the Tamar field is connected to the domestic market and delivers 10 BCM a year. With the completion of the development plans of the Leviathan field, which is due to connect to the domestic market in the fourth quarter of 2019, and the development of the Karish and Tanin fields, which are due to connect to the domestic market in the first quarter of 2021, three separate and significant production systems will be connected to the market which can supply a total of at least 28.5 BCM annually (12 + 10 + 6.5), 3 BCM of which is designated for exports to Jordan. In addition, applications have been submitted to the Commissioner for the approval of exports of 32 BCM from the Tamar lease and 32 BCM from the Leviathan lease until 2030 to consumers in Egypt. The market also has a buoy available for receiving LNG from a regasification vessel with an additional scope of 3 BCM a year.

The professional team was presented with a review of natural gas supply as of 2018 which pointed to a slight difference between the 2012 and 2018 data in the contingent reserves and resources category (PRMS 2C+2P). The Tamar, Dalit, Leviathan and Tanin fields were only joined by the Karish and Tamar Southwest fields. The Zemach Committee report assumed that other than the amounts of natural gas discovered up to that point, there was additional potential for natural gas that was classified at the time as prospective resources, and it was assumed that an additional 150 BCM would be

discovered, of which 51 BCM have been discovered to date. During the period since the Zemach Committee report, 43 BCM have been consumed (40 of which from the “Tamar” field), compared with the demand forecast in the Zemach Committee report that predicted a demand of 49 BCM during this period. Since 2013, when Government Decision 442 was approved, not a single exploration well has been drilled offshore Israel. In addition, the licenses that contained prospects that were included in the calculation of prospective resources in the Zemach Committee report were returned without exploration wells being drilled (Daniel East, Daniel West, Aryeh, Oz, Ruth C). The professional team accordingly concluded that in order to encourage activities in the exploration and production segment, the state should identify the reasons that led to the current state of operations and to continue the policy of encouraging natural gas exploration and development, particularly with respect to small and medium reservoirs.

### **Principle #1**

The review of natural gas demand in the market that was presented to the professional team included 8 scenarios that predict the demand for natural gas in the market over the next 25 years – the period between 2018-2042 - in the electricity, transportation, industrial and petrochemical industry sectors, which are based on various assumptions about the rate of growth of natural gas demand for electricity generation and the rate of penetration of natural gas in other sectors. The professional team chose to adopt the scenario by which the market is due to consume 452 BCM of natural gas during the next 25 years. This scenario allows for meeting all of the government’s targets in the electricity, transportation, industrial and petrochemical industry sectors, including the Ministry of Energy’s policy on reducing the extent of coal use for electricity generation. On the other hand, this scenario also assumes meeting the government’s targets for energy efficiency and electricity generation from renewable energies. The professional team decided to adopt this scenario under the assumption that it is the most likely and suitable scenario in terms of its underlying assumptions and compatibility with the government’s targets. However, the team sought to reserve an amount of gas that would enable to meet the strictest scenario, scenario five of 492 BCM of natural gas, which assumes the energy efficiency targets will not be met in full. We remind that Government Decision 442 stipulated that an amount of 540 BCM must be reserved for the domestic market. In light of the uncertainty surrounding the parameters that make up the key demand scenario, it is proposed that with respect to new discoveries, the amount reserved for the domestic market under Government Decision 442 be updated and that 500 BCM be guaranteed for the domestic market until 2042, which includes a 50 BCM surplus that can serve the domestic market insofar as the government targets for energy efficiency are not realized in full, or if needed for unexpected events or additional years of supply.

When approving natural gas exports, the Commissioner must take into account considerations pertaining to the hourly demand issue, particularly if exports are planned to pass through the national transmission system, and if needed to establish conditions in the export approval in order to ensure meeting the domestic demand at the hourly and daily level by consumers in the domestic market.

In order to prevent the future expected shortage at the hourly level, the professional team also recommended to devise a set of solutions, including encouraging the connection of additional fields to the domestic market, especially near the middle of the next decade (2030-2040).

### **Principle #2**

The government duly notes the professional team's position that in order to ensure redundancy in the domestic market, it is not advisable to cancel the agreement with the regasification vessel connected to the offshore buoy for receipt of natural gas from LNG carriers ("the buoy") (the agreement is currently valid until 2022).

The cancellation of the agreement regarding the regasification vessel or a decision not to extend it, will be re-examined in 2021, and regarding this the government therefore tasks the Director of the Natural Gas Authority with examining in 2021 whether the market has redundancy that allows for meeting the maximum hourly demand in the market and to submit his recommendation to the Minister of Energy by 31.12.2021, prior to making a decision on the renewal or non-renewal of the agreement.

### **Principle #3**

The professional team was presented with the need for establishing rules for special export tracks such as exports of by-products produced from natural gas. In this regard, it is proposed that the Minister of Energy, in consultation with the Minister of Finance and the Minister of Economy, formulate the necessary principles of regulation for the sale of natural gas to consumers in the domestic market which is used to produce by-products from natural gas that are designated mainly for exports, and submit his recommendations to the government within 120 days; and that the Minister of Energy initiate regulatory amendments, including legislative amendments if required, based on said recommendations.

### **Principle #4**

The professional team was presented with an initiative for a natural gas trading platform. This initiative is in the preliminary stages but will have to be regulated, including with respect to the sale of natural gas to consumers outside of Israel using the trading platform.

With respect to the issue of exports through secondary trading, in light of the above it is proposed to determine that in order to enable the future development of a mechanism for secondary trading of natural gas, that secondary trading that could be directed to exports will be limited to 3% of the total sales of natural gas to the Israeli market during the past

year. This amount will not be counted in the calculation of the total amount guaranteed to the domestic market but will not require an export approval and will be counted as part of a natural gas field's obligation of minimum supply to the domestic market. It is hereby clarified that this amount will be counted with respect to the obligation of minimum supply and will not require an export approval despite the possibility of it being exported abroad.

Accordingly, the Minister of Energy, in consultation with the Minister of Energy, is tasked with examining the need for regulatory amendments, including legislative amendments, for anchoring and regulating this matter.

### **Principle #5**

The obligation to connect to the domestic market was stipulated in Clause 1(c) of Government Decision 442. This clause requires lease holders to connect all natural gas fields in the lease area to the domestic market, at the timing and scope that are determined, as part of the deed of lease and in accordance with the conditions set out.

The obligation to connect all producing fields to the domestic market was explained in the Zemach Committee report for two main reasons: the first is to create energy redundancy and security, and the second is to increase the supply to the domestic market and encourage competition.

The review presented to the professional team indicates that the expected energy redundancy and security situation at present is fundamentally different than it was in 2012, and therefore there appears to be room for rethinking the obligation to connect all fields to the domestic market.

The professional team was presented with serious concerns that the obligation to connect constitutes a major barrier to investments in natural gas exploration in Israel. The economic costs and additional statutory and planning difficulties which the obligation to connect to the domestic market imposes on the developers create a precursory chilling effect on the exploration and development of natural gas fields. Consequently, imposing an all-inclusive obligation to connect to the domestic market at present could hurt competition as it creates a significant entry-barrier to additional investments in the sector.

Government Decision 2592 of April 2 2017 regarding the encouragement of small and medium size reservoirs and the declaration of a state of emergency in the natural gas market stipulated that the Petroleum Commissioner be instructed to examine the manner of implementing above Clause 1(c) of Government Decision 442 in order to encourage small and medium reservoirs, i.e. the examination and recommendation as to revising the decision on the obligation to connect all fields to the domestic market are in view of the encouragement of the development of small and medium size fields.

In light of the estimate that three natural gas fields will be connected to the domestic market by 2021, it is proposed that in order to balance between the need for redundancy,

energy security and competition in the natural gas market, including the desire to connect an additional field to the domestic market by 2033-2035 during which a shortage is expected in meeting the hourly demand, and between the desire to encourage the entry of investors into the natural gas exploration and production segment for the purpose of the rapid development of natural gas reservoirs, the professional team recommends regarding discoveries that will be approved as of the date of this decision, an obligation to connect to the domestic market to vary according to the size of each field.

For more information, see pages 52-55 of the professional team's report.

### **Principle #6**

To encourage the connection of additional fields, it is proposed that insofar as exploration activities develop in the southern maritime zone of Israel, that the Petroleum Commissioner, the Director of the Natural Gas Authority and the Director of Budgets at the Ministry of Finance examine the state's participation in the construction of an additional offshore system in the southern polygon approved in National Outline Plan (TAMA) 37/H that includes an offshore receiving terminal and its connection to shore.

In addition, the professional team recommended that additional means be examined for encouraging the realization of the potential economic benefits of natural gas fields, including encouraging the connection to the domestic market of fields that are not obligated to connect to the domestic market or that received a postponement of the obligation to connect pursuant to aforesaid recommendations. Such encouragement may be by way of granting positive scores in competitive bidding to parties that commit to move up the connection to the domestic market beyond what is required of them according to the amount of natural gas in the fields, or other methods.

### **Principle #7**

The professional team also examined the question of the obligation of minimum supply to the domestic market and in particular noticed a certain distortion that was created when the quotas were set, especially in the transition points between the tiers at which the quota rate changes, so that in some cases a small field may export a much higher amount of natural gas than a larger field. In addition, after examining the costs and benefits of imposing an obligation of minimal supply to the domestic market on small and medium fields, the professional team concluded that in order to continue and encourage the development of small and medium fields, the obligation to supply a minimum amount to the domestic market should not apply to fields that contain less than 50 BCM of natural gas.

The professional team therefore recommends that further to Clause 1(h) of Government Decision 442, and the calculation of the obligation of minimal supply to the domestic market for discoveries recognized after the date of the approval of this decision and

thereafter will be in proportion to the size of the field and calculated according to the incremental amount.

**Principle #8**

In light of the uncertainty in the sector as a whole, particularly the uncertainty surrounding the natural gas demand forecast and the changes that could take place in the supply of natural gas, Clause 1 of Government Decision 442 and the above recommendations of the professional team will be re-examined five years after the date of the approval of the government decision anchoring the recommendations of the professional team, similar to the decision made in the Zemach Committee report and Government Decision 442.