



Market-consultation IoT-connectivity for Eneco devices

QUESTIONS AND ANSWERS



Introduction

This document contains the Questions and Answers related to the market consultation for connectivity for IoT-devices for Eneco.

Version history

This document is generated 01-03-2019, updated 06-03-2019. Please note that the order of questions has changed in this version; new questions have been added and sorted per topic; and some previous answers have been changed to some extent.

Q&A

No:	Question	Answer
1	When do you expect this tender to be published?	In 2 to 6 months.
2	Is it certain a Tender will be published?	Eneco has serious intentions to start a Tender, but a guarantee cannot be given at this stage.
3	Who is/are the supplier(s) of the heat meters?	The heat meters related to the IoT connectivity are not part of the install-base yet; this will be new meters that haven't been selected.
4	Will there be also be a tender for the smart-heatmeters?	Eneco is exploring the options; a Tender is a likely possibility. The specifications of the smart-heat-meter will be aligned with those of the IoT-connectivity service.
5	Is there a preference for a specific smart-meter or supplier?	No, there is no preference.
6	In relation to the smart heat-metering project; what are the project phases and what is your planning?	Information on phasing and planning will be provided at a later stage.
7	What kind of information does the smart-meter need to transfer?	Information like: Calculated heat consumption (GJ) Flow (m3/h) 2 x Temperature(s) (Celsius) Device status messages/codes

		Device identification code Please see question 20.
8	What is the lifecycle of a heat-meter?	According to manufacturers a smart heat meters can have an expected lifespan of 18 to 20 years, depending on the conditions. During this period one visit by a technician is foreseen to calibrate the meter and/or to change the battery, therefore we require the battery to last at least 10 years.
9	You mention "other IoT-initiatives" in the document; What other IoT devices does Eneco want to rollout?	Eneco is an integrated energy company that allready uses connected-devices in households, for example: https://nieuws.enecogroep.nl/eneco-en-peeeks-lanceren-slimme-boiler/ https://www.eneco.nl/energieproducten/crowdnett/ Future initiatives cannot be shared in detail at this moment but are likely to be related to device-monitoring and heating. Devices are therefore likely to be indoor and static.
10	Why does Eneco specify NB-IOT and LTE-M as Network technology?	NB-IOT and LTE-M are part of the current requirements because of the desired signal penetration in and below buildings and the dependence of battery power for operating the IoT devices. Besides penetration and low energy consumption we think these protocols have good data rates and low latency. Furthermore, these standards belong to 3GPP and are therefore expected to be supported for a while by more market parties. We avoid propriety standard due to regulations of TSO's (See for example Mindestanforderungen an die Informationstechnik des Reservenbieters zur Erbringung von Regelreserve Published on https://www.regelleistung.net/ext/static/srl/it) Both NB-IOT and LTE-M are desired; because NB-IOT is preferable for battery operated devices and

		LTE-M for devices that have other requirements for bandwidth, latency etc.
11	We see other techniques for meter read outs, like wireless M-Bus. Could you elaborate why this isn't a suitable technique to use?	Wireless M-Bus has been tested in the field in a pilot setup by Eneco; the results of these test have led to the conclusion that M-Bus is not a preferred solution due to low quality of the data transmission and costs. If you believe M-Bus can provide a proper solution, please share any suggestions in your submission.
12	Could SigFox or LoRa provide a possible solution for Eneco?	LoRa and SigFox are not part of the 3GPP standard and operate in the unlicensed frequency bands. Eneco believes possible congestions or other errors could occur in unlicensed spectrum bands because of activities by other parties in these bands. Furthermore, technical requirements include requirements related to bandwidth and latency make these technologies less likely to fit. Also, Eneco does not have full confidence in the lifespan of these technologies. If you believe these technologies to be able to offer a solution, we would like to see your explanation in your answers.
13	What platform do you have in mind? What aspects of the metering project scope are on your side and what is expected of the supplier?	See "figure 1: LPWAN Domains, Services and Interfaces".
14	How does the smart-meter interface with the Communication Layer?	Eneco is exploring the options for interfacing with the smart-meter. A possibility could be a gateway that is connected to the meter. In case a gateway will be used; it is expected that every smart-meter will have its own gateway (that could also be used for other IoT-devices) instead of multiple meters connected to one gateway. This gateway will be installed inside the residence of the customer.
15	In relation to question 2b; what do you mean by a price per megabyte for pooled data?	For the IoT project; we seek a price-mechanism based on the accumulation of the data use of the total number of IoT devices, which charges against a rate per megabyte, instead of charging for the

		amount of individual IoT subscriptions with a predefined data bundle. For the SIM-only project; we seek a similar price-mechanism.
16	Could you elaborate on 1b and 1c?	It is important for Eneco to obtain the IoT connectivity service at an attractive price. "Over-delivery" is not required and in fact needs to be avoided if possible. Therefore, we ask you to review our requirements thoroughly and point out any requirements that you find unnecessary are likely to lead to extra costs compared to your standard IoT subscription.
17	Could you please share more details about the requirements concerning Track & Locate?	Although the IoT-devices are static; Eneco would like to be able to track & locate a device to find its position in the household. (XY coordinates and possibly Z)
18	Could you please share more details & requirements concerning transport layer encryption?	Eneco wants the supplier to take the responsibility in providing the transport layer security, Eneco then will be responsible for security on the application layer. E.g. TLS encryption should be standard between the SIM and the Telecom backend, and between the telecom backend and Eneco's backend. But Eneco will put on top of that (the application layer) their own encryption.
19	Does Eneco intend to make its sole decision about the IoT Platform & Gateway or is Eneco open to suggestions?	Eneco is open to suggestions; this market-consultation serves that purpose; please share any suggestions in your submission.
20	Could you please share more details about the type of Data & frequency of data?	Downstream: For heat meters: • Calculated heat consumption (GJ) • Flow (m3/h) • 2 x Temperature(s) (Celsius) • Device status messages/codes • Device identification code The frequency of data downstream: • For heat-meters every 15 minutes a message from the device.

		○ This does not count for all meters as it depends on the approval we receive from our customers. Other frequencies could be 1 x per day, 1 x month Upstream: For heat meters: • OTA services • firmware updates The frequency of data upstream: 4x a year Other devices will be specified in the requirements in the Tender.
21	Could you please share more details about the functional requirements of LPWAN? Could you please explain why Eneco needs LPWAN for connecting smart meters?	Detailed requirements will be composed after completion of the market-consultation and will be shared in the Tender phase. LPWAN is needed for connecting the smart meters because Eneco doesn't want to be dependent of the internet connection of the household, neither does Eneco want to build/operate/maintain their own network. See also for public available information: Mindestanforderungen an die Informationstechnik des Reservenbieters zur Erbringung von Regelreserve Published on https://www.regelleistung.net/ext/static/srl/it)
22	Could you elaborate on Question 12? (<i>How do you believe Eneco should organize the management of 350.000 connections after role out?</i>) What do you want to gain with this question?	We would like to hear about your experience in managing a large number of IoT devices, to get a sense of what we should organize at our side in terms of expertise, FTE, processes and means.
23	Could you please share more details about intended situation after the roll-out – could you please share the requirements & expectations – (related to Q12: <i>How do you believe Eneco should organize the management of 350.000 connections after role out?</i>)	please see question 22.

24	In the market consultation document, it is indicated that the final date for submitting the answered questionnaire is 8th march 18:00, while the deadline indicated in TenderNed seems to be the 6th of March 12:00. Could you please indicate the right submission deadline?	8th march 18:00 is the final date for submitting the answered questionnaire; 6th of March 12:00 was the final date for asking questions related to the published documents.
25	How can we submit our answers?	Please sent your answers by the communication module in TenderNed. You can send a message and attach a document containing your answers.
26	Can we send the answers to Eneco by for example Just share if the files are too large for mail?	Maximum file size for a file attached to a message sent by TenderNed is 2000mb. Multiple files can be attached to a message. Please split your information over multiple files if it exceeds this limitation.
27	Concerning Question 10 (<i>What are your thoughts on IOT security standards and protocols? There are some standards/protocols being developed, e.g. NISTIR 8200 or UL 2900-1. Are you planning on implementing any of these standards?</i>) Why do they need the US standard certifications?	Eneco has not decided on requirements related to the security standard, the NISTIR 8200 or UL2900-1 are mentioned as examples. We would like to hear your thoughts on these standards or other standards/protocols.
28	Can you please elaborate on the IoT Platform selected for aggregating data from the Smart Meter.	Please see answers to question 13 and 19. The actual IOT platform on Eneco's side has not yet been decided on. We are exploring and open to suggestions of possible platforms that could interface with the Telecom backend. Please also see question 11 "Device Management" of the market consultation document.
29	What IoT platform and device management platform will be used?	See answer on question 28.
30	Is Eneco expecting to tender the integration with the platform separately?	Once the decision on the Eneco platform is made (see question 19) we expect the Telecom provider to collaborate with Eneco/Plaform supplier in order to integrate both platforms. "figure 1: LPWAN

		Domains, Services and Interfaces”, shows possible methods of interfacing with such a platform. Therefore, no separate Tender will be executed solely for the integration of two platforms.
31	The connectivity solution to be provided includes existing devices like (Toon)? What are the services currently being monitored in these devices.	The main use of the desired Iot-connectivity service is for the smart heat-meters. Other Iot initiatives could follow. Toon is not on the roadmap because it is a best-effort service and for this tender we seek a business critical service level.
32	Do you have any specifications of the IoT devices or smart heat meters mentioned?	Please see question 3 and 9.
33	Is 220v power an option for smart heat meters?	In most cases, smart heat meters are not in close proximity of a power socket and therefore we have to rely on battery power.
34	What is the frequency / interval of messages from the smart heat meter?	See answer on question 20