

# Request for Information

## Disclaimer

No rights may be derived from this RFI. Stedin will use the outcome to study and initiate further steps. Stedin has no obligation to proceed with a formal RFQ process after this Request for Information.

## 1. Stedin Netbeheer B.V.

Stedin is the independent grid operator (DSO) in the most densely-populated part of the Netherlands: the province of Utrecht and the province of Zuid-Holland, which features the largest port of Europe. It has high-density urban areas with a complex infrastructure, and with a high dependence on energy which requires its continuous availability, both now and in the future. The company is responsible for the development, installation, control, maintenance and management of energy grids. Stedin is the link between more than two million customers and the energy suppliers. The company's 3,100 employees ensure the safety, quality and reliability of the energy grid. Stedin is headquartered in Rotterdam.

Stedin strives for the highest reliability. To maintain this, it invested nearly 500 million euros in its grid in 2014 and 2015.

Stedin's ambition as a pro-active grid operator, is to expedite the energy transition by facilitating the market, and by contributing to a future market design where the customer can engage successfully as a prosumer. Stedin demonstrates this by executing and participating in multiple pilot and demonstration projects, and by contributing actively to national and European discussions on future market design (see also [www.stedin.net](http://www.stedin.net)).

## 2. Background

Stedin currently provides tariff switching services via its electricity grid, so that customers can benefit from day and night tariffs. Historically these tariff switching services and other switching services for example for boilers, have been developed and are delivered as part of a vertical integrated utility. Ripple control technology (Dutch: toon frequent), transporting switching signals via the electricity grid, is used for on/off switching of devices. See Appendix 1 for more technical information on the current meter set-up and existing ripple control-based boiler switching.

Market and technology development have led to a situation where delivery of switching service for boilers may no longer be continued by Stedin in the near future:

- Smart meter roll-out is taking place in the Netherlands, expected coverage being >80% in 2020. These smart meters take over the day/night tariff switching, and make new tariff propositions (time-based) possible. However these smart meters do not serve the boiler 'day/night' switching.
- The existing ripple control technology is at its end-of-life and is too costly to maintain, so that future reliability and performance issues are expected.

As a consequence of the developments described above, as a customer-oriented organisation, Stedin seeks solutions which offer a replacement for the boiler day/night switching service, in a way that complies with the regulatory framework, so that customers connected to our grid can continue to benefit from boiler-switching services.

Stedin recognizes that for the energy transition to be successful, customer adoption of demand-side flexibility will be essential; Stedin has thus adopted a strategy to facilitate market parties optimally (e.g. aggregator role) to make them successful in delivering demand-side flexibility as a contribution to an affordable energy system.

Stedin also recognizes the potential of approx. 100k heating systems (average 2 kW per system) in its operating area to contribute to demand-side flexibility (representing 200 MW on the balancing market).

In conclusion, Stedin seeks market parties with whom they can engage to transfer the boiler-switching service so as to ensure the continuation of this service for our end-users. In the future the use of boiler-switching services can be enhanced to a higher service level which integrates this service as a flexibility source in the energy system.

### **3. Request for Information from the market**

Stedin would like to contact market parties with a serious interest in delivering this service to end-users. They may be single parties or consortia. The typical target group Stedin aims at may be parties willing to act as future aggregators, such as traditional suppliers or independent aggregators. Others might be boiler manufacturers, heating installation, smart devices and home automation firms. Maintenance companies, Telco's and building and construction companies considering expanding their services to end-users may also have an interest in engaging.

Stedin would like to engage with these parties, evaluate their proposals/offers and then define the next steps jointly for transferring the traditional ripple control-based boiler-switching service to the market. Stedin welcomes all ideas and proposals that can replace the current boiler-switching device, and anticipates a range of solutions, among others:

- A market party replaces the existing boiler-switching device with an internet-connected device through which it offers switching services to the customer; the solution contains at least the switching between day and night, but also future flexibility services;
- A market party replaces the existing boiler-switching device with a device connected to a home-energy management system, through which the boiler-switching service is delivered as part of an integrated home-energy management offering;
- The market party could be a supplier, aggregator or also a boiler service company extending its existing service portfolio (e.g. maintenance) with boiler-switching service;
- Network connectivity for remote boiler-switching could be provided by telecom service providers (using the customer's existing internet connection) or via a high-reliability wireless network solution, 'Utility Connect' network, using CDMA technology.

For this purpose Stedin regards delivering connectivity to market parties as part of its market facilitation services portfolio, as it supports a level playing field for energy-market players in connectivity to end-user energy-network-related devices in a highly reliable way that also ensures security of supply and grid stability, this being a core task of Stedin as a regulated grid operator.

Stedin would like to set-up a project and initiate market communication to transfer this boiler-switching service to those market parties which have shown serious interest and whose solution Stedin qualifies as being a good alternative to the existing service, in order to recommend this to its customers.

In a future phase Stedin would also be interested in working with these market parties, as a source for flexibility for the mitigation of local congestion, applied by Stedin.

#### **4. What Stedin could offer the qualified market parties**

In this engagement Stedin could offer:

- Active participation, co-project management focused on a seamless transfer for end-customers to qualified market parties (period 2016-2020, aligned with Stedin's smart meter roll-out programme);
- Market communication to all customers connected to its distribution grid regarding the transferral to recommended qualified partners, of this switching service for boilers;
- Depending on the solution developed, Stedin could offer to continue the transparent transport of switching signals from market parties via its own reliable wireless solution, which is also used for reading smart meter data. Stedin considers this option as part of its task to facilitate the market.

This engagement will not lead to a typical demand-supply contract between Stedin and selected parties. It is however envisaged that a joint plan is agreed on co-operation in project management.

#### **5. What Stedin would expect from qualified market parties**

In this engagement from market parties Stedin would expect:

- Willingness to work with Stedin in transferring this service;
- Willingness to invest in the adaption of the 'boiler-switching device' (replacement of the boiler relay by a modem or other device);
- To continue the existing boiler-switching service to all end-users free of charge (original day/night switching evolving into more state-of-the-art flexibility services);
- To become owner of this service to end-users.

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The business model for qualified market parties would be based on offering the volumes of flexibility, retrieved from these boilers, to different markets (balancing, intraday- and day-ahead markets), including cross-selling opportunities on boiler maintenance contracts.

## 6. Planning

Stedin is planning to phase-out Ripple Control technology in a phased approach following the smart meter roll-out.

This is shown in the table which can be downloaded from the Stedin website:

<https://www.stedin.net/zakelijk/open-data/slimme-meter-planning>

## 7. Questions

As part of this Request for Information, Stedin would like to receive answers to the following questions:

	<b>Name company / companies:</b>	
	Question	Answer
1.	Are you interested in providing the boiler-switching service to end-users?	
2.	What is the solution you want to use to provide this service? (Please describe your initial views on both technical and process elements of the solution and service).	
3.	Are you willing to co-operate with Stedin to ensure a seamless transfer of this service?	
4.	What would your proposal be to the end-users?	
5.	What would your proposal be to engage with Stedin on this transferral of service?	
6.	Would you be able to accommodate the foreseen planning? If not, what planning would you propose?	
7.	Would you be willing to invest in the required boiler adaptation? What would your solution be?	
8.	Do you expect any issues or barriers relevant to this engagement? What mitigation measures would you propose?	
9.	Do you already have relevant experience in similar types of engagements?	

10	Are there other relevant aspects you would put forward here?	
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## 11. Process

Stedin envisages the following process:

- Reception of answers to this request.
- Organisation of a meeting in which we ask parties, which submitted relevant proposals/thoughts, to present and discuss these proposals/thoughts.
- Stedin sending out a request for a formal proposal to all relevant and interested parties.
- Assessment of the received proposals, to ensure that they qualify such that Stedin could recommend these solution(s) to its end-users; selecting relevant proposals.
- Drafting and agreeing a joint engagement plan, including customer communication.
- Realizing the transferral of the service.

Stedin aims at having a level playing field in the market. This Request for Information will thus be open to all interested parties. Stedin will publish this request via traditional communication channels, but will also target relevant market parties directly, so as to receive the maximum response to this Request for Information.

As a first step in this process we would like to ask interested parties to reply to the 10 questions formulated in this RFI no later than **< 16.00 on 29 July >** to Mr Ab Zijlstra (Stedin Procurement department): via Commerce Hub.

Appendix 1 technical information on the current meter set-up and existing ripple control-based boiler-switching.

**Typical example of existing situation**

