

# Enapter Service Bulletin #4

## 1. Important update: Routine maintenance for the EL2.1

Ensure never to block the purge line from the atmosphere – the system needs to vent to return to a safe condition when not producing Hydrogen. If a purge outlet is blocked, the system can be damaged irreparably.

### **Never block the purge line of your electrolyser systems.**

Especially when:



- The system is not at ambient temperature.
- The system or any system connected to the same common purge has recently vented off internal H<sub>2</sub>.
- The stack voltage is above 1V.

For transport and after decommissioning, a simple cap should be used to avoid solid contaminants entering through the bulkhead. This cap should not create a gas-tight seal.

We will soon release detailed maintenance instructions for our cabinets (CAB2.1) to avoid general mistakes with routine maintenance procedures of our systems.

### ➤ **Important advisory: Cabinet Integration**

*For partners building and assembling cabinets to hold our modules:*

We highly recommend eliminating the valves on the output lines for “H<sub>2</sub> Out” and “H<sub>2</sub> Purge” on each cabinet position.

- Integrators must consider maintenance instructions and procedures when designing systems to help avoid the chance of human errors.
- Cabinets can still be isolated (for example, by a valve) utilising standard engineering practices on the hydrogen output line.

For further questions, please contact our support team at [support@enapter.com](mailto:support@enapter.com).

## 2. FW Update for the EL2.1

It has come to our attention that common system purges can negatively affect our electrolyser systems and reduce the output hydrogen purity by increasing the ppm amount of O<sub>2</sub> in the H<sub>2</sub>. This phenomenon cannot create a dangerous condition due to our system architecture, but an increase of O<sub>2</sub> in the H<sub>2</sub> outlet can lead to decreased system performances of devices connected to it.

- We have implemented an effective containment solution for this issue by changing how the EL operates the purge solenoid valve.
- This will cause a slight increase in the stand by power consumption of modules when in standby mode by around 3 W (average).

**Action needed:** We have released a firmware update to effectively contain potential issues triggered by common purges; please update your firmware version as soon as possible. To update your device, navigate to **Device Info -> Firmware** and press the **Check for Updates** button. If you do not see an available update, you can contact our support team at [support@enapter.com](mailto:support@enapter.com).

## 3. Recommended start/stop operation of the Enapter electrolyser

As with all electrochemical devices, our AEM electrolyser stack's lifetime is shortened with frequent start/stops. With increasing experience in the field and operational data, we can now recommend our customers to limit the electrolyser's operative cycles to a maximum of five on/off cycles per day, and one on/off cycle per hour. This helps to ensure the longevity of the electrolyser.

The electrolyser works most efficiently and is most durable when operating continuously. However, our modular design and the Enapter Energy Management System are perfectly suited to accommodate for changing renewable energy supply or fluctuating demand. Individual ELs can be ramped from 60-100%, and the combination of many ELs will allow you to achieve any flowrate needed. If hydrogen demand is intermittent during the day, the addition of an appropriately sized buffer tank can minimise on/off cycles of the electrolyser.

If you want to know more about this topic, you can visit the Enapter Handbook [here](#).

## 4. We updated our Knowledge Base!

We have optimised our [Knowledge Base](#), in order to make information about our electrolysers more accessible and easier to find with more content and improved structure. You now have the possibility to navigate through the different chapters via an additional table of contents on the right side.