

## Nord Pool Single Sign on Solution (SSO) Frequently asked Questions

### What is SSO?

Single Sign On is a service that handles your logon access control and permits a user, via one set of login credentials, (username and password) to access multiple applications.

### What are the benefits of SSO?

Moving to our SSO solution will allow members to navigate between applications and remove the need for physical tokens. SSO authenticates the end user for all the applications the user has been given rights to and eliminates further prompts when the user switches applications during the same session.

### When will SSO be implemented by Nord Pool?

Nord Pool has implemented SSO in several web applications already, starting in mid-2016, and will continue to roll out SSO to all our web applications. Currently the following web applications have implemented or will be implementing SSO:

Web Application	SSO Status
CASS	Implemented
REMIT	Implemented
UMM	Implemented
GB Half Hourly Day Ahead Auction	Plan to implement at go live in Q3 2017
Day Ahead Web	Plan to implement in near future
<b>Intraday Web</b>	<b>November 2017</b>

### Security – 2-Factor Authentication (2FA) for Trading Platforms?

Today, access to Nord Pool’s trading platforms such as Day Ahead Web and the ELBAS4 Java Client are augmented with the use of physical tokens (digipasses) that provide secure one-time password technology that establishes user’s identity with 2-Factor Authentication (2FA).

Security is important for Nord Pool and when migrating to SSO in our trading platform the method in which 2-Factor Authentication is implemented will change. Physical tokens (digipasses) will be phased-out and replaced with 2FA that does not require physical tokens.

With SSO access, Nord Pool will deliver the 2FA tokens via the Authy OneTouch process. The default Authy OneTouch process will provide a push notification sent to the mobile app of the user, providing the following are true:

- The (valid) mobile number of the user is known to Nord Pool.
- The user has installed the Authy mobile app (iOS or Android).
- Authy service has identified that the user has a OneTouch-compatible device and app version.

For those not permitted to use mobile devices, Authy OneTouch also provides support for your personal computer and the 2FA token can be delivered directly to your desktop.

### **Are there other methods available for delivery of one-time tokens?**

Should the default mobile solution or delivery to your desktop as described above fail, there are various other fall-back methods available, as follows, to deliver one-time tokens to grant access:

- SMS message (to the mobile number stored in Nord Pool user database)
- Phone call (to the mobile number stored in Nord Pool user database)
- Email (to the email stored in Nord Pool user database)
- Phone call (to the *landline* stored in Nord Pool user database)

### **What does Nord Pool need when setting up SSO users?**

Nord Pool will require a valid email address and mobile number for each SSO account that is configured.

The newly created SSO accounts will be configured for each individual end user, using the email address as the username

### **How are SSO users linked to Member and Portfolios?**

Before SSO accounts can be used, they must be linked to the Member and Portfolio (or set of Portfolios). Nord Pool will request confirmation of the user account linkage from your trading responsible contact person.

### **Can we continue to use our existing SSO accounts?**

Yes. For example, if you already have an existing SSO account set up for the CASS Member UI or the UMM system, then these accounts will continue to work as they do today.

### **Accessing APIs via SSO?**

Nord Pool has implemented SSO technology in all the APIs that we offer. SSO user credentials for APIs are unique to the system that they are intended for, therefore, navigation to Web Application from your API enabled account is not possible.