

#### CBP 2019-001/01 - Version 1, final

## **EASEE-gas**

5 European Association for the Streamlining of Energy Exchange - gas

### **Explanatory Notes**

Number: CBP 2019-001/01

Subject: Explanatory notes accompanying CBP 2019-

001/01 "Agreement update & Certificate

exchange"

**Summary** 



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#### 31 About EASEE-gas

32 <u>https://easee-gas.eu/about-easee-gas</u>

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#### 34 **Version List**

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Number/ Version	Approved	Implementation date
0.2	TSWG	
1	ExCom	22-10-2019

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#### **Reference List**

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Reference	Document name	Version
1	CBP 2019-001/01 "Agreement update & Certificate exchange"	1
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## Explanatory Notes CBP 2019-001/01: "Agreement update & Certificate exchange"

#### 1. INTRODUCTION

This document will explain the process of the CBP and also gives some implementation guidelines. In general it follows the ENTSOG recommendations for this specific subject.

The CBP on "Agreement update & Certificate exchange" implies the implementation of additional AS4 functionality which was initiated for the following reasons:

- 1. ENTSOG choose a new standard for exchanging public keys using AS4;
- 2. When using the AS4 for agreement updates, which can also include the updates of the certificates, the coordinated project for updating certificates (MoC) is no longer needed.

The ENTSOG document on Agreements and Agreement updates [AAU] explains the underlying concepts and the formats and protocol of the update mechanism.

#### The main benefits include:

- New certificates are distributed securely, using signed and encrypted AS4 messages, between peers.
- The certificate updates are linked to the messaging configurations (P-Modes) to which they apply.
- The updates are in a structured electronic format that supports automated validation and loading.
- New certificates can be introduced without shutting down the AS4 system and/or stopping the exchange of AS4 messages.
- Old and new certificate configurations can be used in parallel during a transition phase. In case of a problem with the new certificate, the old configuration is still available and can continue to be used temporarily until a fix is found (As long as the old certificate is still valid).
- Individual certificates can be updated. There is no need to synchronize multiple certificate updates and having a coordinated project.
- The identification of the agreement update is also given in the message to avoid typing mistakes.

It is still strongly recommended to use EASEE-gas certificates because they follow the requirements and therefore interoperability with partners and AS4 systems is guaranteed.

#### 2. ORGANISATION

- The CBP was developed by the EASEE-gas TSWG (Technology Standards Working
- 63 Group). The following segments were involved: TSOs, Shippers, Producers and
- Service providers. The nationalities represented were: B, D, DK, F, I, N, NL and GB.

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#### 3. GENERATION PROCESS

- The CBP is created because most parties in the gas market will have document
- 88 exchanges using AS4.
- 89 Alternatives
- Manual updates of certificates and agreements. Changing the certificates have to be
- organised by each individual company. EASEE-gas will not organise a MoC in the
- 92 future.
- 93 Pros and Cons
- 94 Pros:

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- Implementing this this CBP makes configuration and certificate changes easier and also improves the quality (errors caused by manual actions).
- The MoC project won't be needed anymore which saves money for the EASEEgas organisation.
- Less operational work for individual companies.

100 Cons:

- At the release of the CBP it is not clear which AS4 software supports this messages partly or completely. (ENTSOG will perform interoperability tests in 2019).
- There will be no central signalling of certificate expiration.

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- 106 Final approach
- It seems feasible to set an end date of ??? for the EASEE-gas members. (outcome of
- 108 PoC tests)

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#### 4. IMPLEMENTATION GUIDE

- EASEE-gas encourages the possibility of supporting multiple agreementrefs each
- referencing a different set of certificates, to support ease of change of certificates.

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Also the use of exchange of configuration parameters through AS4 messages is recommended in order to support ease of setting up a partner.

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Each company will be responsible for monitoring the expiration date of the certificates and send the agreementupdate to their communication partners.

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EASEE-Connect helps in organising all relations between the companies. Certificates are also uploaded to the system.

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- 124 Implementation procedure for production:
  - 1. Update EASEE-Connect and create a new agreement
  - 2. Send agreement update message
- 3. Agree on the update\*
  - 4. Use the ebMS3 testservice (in production)
  - 5. If test is OK, use the new agreement in production

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\* It is possible to decline the suggested implementation date and send a proposed new date in return.

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- Since the support of the agreementupdate is tested in acceptance at the initial connection test, the agreementupdate can be performed in production without using
- the test/acceptance systems.

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- 138 5. TECHNICAL SET UP
- In this chapter the technical set up of the AS4 system is given.

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#### Set up Current Configuration

- P1 and P2 must both deploy P-Modes using a current certificate for P1.
- Note that there is a need to deploy P-Modes for:
- At least one EDIG@S **Service**, involving exchange of at least one EDIG@S document (referenced as Part Property) between P1 and P2 or P2 and P1.
- A test service message from P1 to P2.
- A test service message from P2 to P1.
- Certificate Update message from P1 to P2 and Response or Exception from P2 to P1.
- Certificate Update message from P2 to P1 and Response or Exception from P1 to P2

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- All these P-Modes use the same value for **AgreementRef** as explained in the
- referenced specifications.

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#### 154 Verify Correct Functioning of CONF-CUR

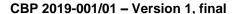
- To verify the correct deployment of the configuration:
- P1 can send a test message to P2, which P2 acknowledges with an AS4 receipt (not error).
  - And/or P1 sends a test message to P1, which P1 acknowledges with an AS4 receipt (not error).

#### P1 Preparation of Update to CONF-NEW

- To initiate an update of a certificate, P1 must prepare a proposed new agreement,
- to which new P-Modes are to be added as are defined in the existing agreement,
- supporting the same types of messages in all directions but using a distinct
- 164 **AgreementRef** and differing in one associated certificate.
- P1 must deploy, or schedule the future deployment of, this new updated
- configuration in its own system. This is done using its configuration management API
- ([Error! Reference source not found.], section 2.2.8).
- The future deployment case relates to cases where the agreement is scheduled to be
- activate some time in the future (e.g. some number of working days ahead, to allow
- all parties to process the update).
- Note that the existing agreement and its P-Modes are not removed, at least not yet.
  - As described in section 2.3 of the ENTSOG document on Agreements and Agreement Update [Error! Reference source not found.], for all incoming connections, the update adds new P-Modes, allowing P1 to receive messages from P2 using either the old or the new agreement.
    - For outgoing messages, as described in section 2.4 of the ENTSOG document on Agreements and Agreement Update [Error! Reference source not found.], the update adds new P-Modes, allowing P1 to send messages to P2 using either the old or the new agreement.
    - To be safe, it is possible to initially only deploy, for outgoing messages, the test service for the new agreement. See section 0.

#### Requesting an Update to P2

- P1 must agree with P2 to deploy this new agreement. This is done by sending a
- 184 Certificate Update XML message to P2 that has an ebCore Agreement Update XML
- message that expresses the requested update. This message includes an XML
- document containing the current and new certificate, the current and new agreement
- identifier.





#### 188 P2 Preparation of Update to CONF-NEW

- When receiving an update request, P2 is expected to review it. If the request is
- accepted, P2 must deploy, or schedule the future deployment of, this new updated
- configuration in its system. This is done using its configuration management API
- ([Error! Reference source not found.], section 2.2.8). Note that the existing
- agreement and its P-Modes are not removed, at least not yet.
- As described in section 2.3 of the ENTSOG document on Agreements and Agreement Update [**Error! Reference source not found.**], for all incoming connections, the update adds new P-Modes, allowing P2 to receive messages from P1 using either the old or the new agreement.
  - For outgoing messages, as described in section 2.4 of the ENTSOG document on Agreements and Agreement Update [Error! Reference source not found.], the update adds new P-Modes, allowing P2 to send messages to P1 using either the old or the new agreement.
  - To be safe, it is possible to initially only deploy the test service for the new agreement. See section 0.

#### 204 Communicating the Update Acceptance or Rejection to P1

- 205 If in step 0 P2 accepted the update request, this is to communicated by P2 to P1
- using an update response message. P2 must prepare the corresponding XML
- document and send it using an AS4 message with the appropriate **Service** and
- 208 **Action** values.

#### 209 Confirming the new configuration in P1

- 210 If P2 receives a confirmation from P2, it knows that P2 will deploy the new
- agreement and related P-Modes and certificates at the agreed activation date and
- 212 time.

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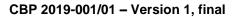
#### 213 **P1 Validating the new configuration**

- P1 may use the test service, referencing the new configuration using the new
- 215 **AgreementRef** value, to verify correct deployment at both sides.
- 216 If this is successful, the new configuration can now also be activated for outbound
- business messages (if this had been postponed to be safe, as mentioned in section
- 218 0).

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#### P2 Validating the new configuration

- 220 Similarly to P1 (see section 0), P2 can test the new deployment using the test service
- and use it for business messages if successful.



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222	Retire existing configuration			
223	Once P1 (respectively P2) has successfully tested and deployed the new			
224	configuration for messages to P2 (P1), and has noticed that P2 (P1) has similarly			
225	tested and deployed the new configuration for messages to P1 (P2), the old			
226	configuration can be retired. This does not need to be done immediately.			
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229	6. DEFIN	ITIONS		
230	AS4:	Applicability Statement 4 [AS4], a web services based protocol for		
231	ENTER O	transporting documents.		
232	ENTSOG:	The European Network of Transmission System Operators for Gas		
233	API:	http://entsog.eu/.		
234	TSWG:	Application Programming Interface.		
235 236	1500.	EASEE-gas Technical Standard Working Group.		
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238	7. REFERENCES			
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248	df			

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