**North American Energy Standards Board**

**Request for Initiation of a NAESB Business Practice Standard, Model Business Practice or Electronic Transaction**

**or**

**Enhancement of an Existing NAESB Business Practice Standard, Model Business Practice or Electronic Transaction**

**Instructions:**

 **1. Please fill out as much of the requested information as possible. It is mandatory to provide a contact name, phone number and fax number to which questions can be directed. If you have an electronic mailing address, please make that available as well.**

 **2. Attach any information you believe is related to the request. The more complete your request is, the less time is required to review it.**

 **3. Once completed, send your request to:**

 **Rae McQuade**

 **NAESB, President**

 **801 Travis, Suite 1675**

 **Houston, TX 77002**

 **Phone: 7133560060**

 **Fax: 7133560067**

 **by either mail, fax, or to NAESB’s email address, naesb@naesb.org.**

**Once received, the request will be routed to the appropriate subcommittees for review.**

**North American Energy Standards Board**

**Request for Initiation of a NAESB Business Practice Standard, Model Business Practice or Electronic Transaction**

Date of Request: July 9, 2018

1. Submitting Entity & Address:

|  |  |  |
| --- | --- | --- |
| Big Data Energy Services5333 Westheimer Rd, Suite 1000Houston, Texas 77056 | Adjoint Inc120 St James Ave, 6th FloorBoston, MA 02116 | Pariveda2811 McKinney Ave Suite 320Dallas, Texas 75204 |
| American Electric Power Service Corp.1 Riverside PlazaColumbus Ohio 43215 | Tennessee Valley Authority1101 Market StreetChattanooga, TN 37402 | JKM Energy & Environmental Consulting5028 Tangle LaneHouston, Texas 77056 |

1. Contact Person, Phone #, Fax #, Electronic Mailing Address:

|  |  |  |
| --- | --- | --- |
| Name: Cade BurksTitle: Chief Digital OfficerPhone : 832-661-9127Fax: I don’t have a pager either!Email:Cade.Burks@BigDataEnergy.com | Name: Somil GoyalTitle: Chief Operating OfficerPhone: +44 7985 964 387Fax:Email: somil@adjoint.io | Name: Jeff HilliardTitle: Vice PresidentPhone: 214-392-9662Fax:Email: jeff.hilliard@parivedasolutions.com |
| Name: David CanterTitle: Manager, RTO & Public PolicyPhone: 614-716-1780Fax:Email: dmcanter@aep.com | Name: Valerie CrockettTitle: Senior Program Manager, Energy PolicyPhone: 423-751-6096Fax:Email: vjcrockett@tva.gov | Name: Terence ThornTitle: PresidentPhone: (713) 248-7138Fax:E-mail: tthorn@txthorns.net |

1. Title and Description of Proposed Standard or Enhancement:

Title:

Request to develop a standard digital representation of natural gas trade events, consistent with NAESB WGQ Standard No. 6.3.1 – NAESB Base Contract for Sale and Purchase of Natural Gas, in order to capitalize on smart contract and distributed ledger technologies.

Description:

Currently, blockchains are developed in the industry in siloed-environments, with different modeling languages being used to effectuate the code for individual smart contracts. An agreed upon industry-wide language for smart contracts will increase the efficiency and interoperability across these various platforms. This request proposes the standardization of a modeling language for smart contracts and utilizes the language to create a smart contract for the NAESB WGQ Standard No. 6.3.1 – NAESB Base Contract for Sale and Purchase of Natural Gas.

The NAESB Base Contract for Sale and Purchase of Natural gas is settled on a cumbersome process that includes emailing a PDF invoice each month. Other delivery mechanisms are used, but less than 5 percent use electronic transactions (EDI). The invoices must be reconciled and paid in a short period of time. In some cases, a preliminary invoice is sent for reconciliation before the final invoice is sent. The invoices are also large monetary amounts that can be very costly if errors are not caught or if payment is late. The settlement process is a good candidate for blockchain technology.

Smart contracts are protocols embedded into blockchain platforms to facilitate the automatic self-execution of a transaction if agreed upon terms are met. A blockchain is a distributed ledger used for recording transactions and tracking assets in blocks. This distributed ledger is maintained by a group of peers, or several computers, instead of a centralized authority that may be vulnerable to attacks. Through the peer-to-peer network, each transaction, or block, is verified by consensus on the performance of a computer algorithm before it is added to the blockchain. Having numerous copies of the historical record on the ledger across the group of peers increases the veracity of the ledger, as false and/or fraudulent blocks are identified and removed by a failure to reach consensus on the algorithm that is calculated by the peer group. The transparency of blockchains is demonstrated by the record of activity that is available to those who have been granted access to the blockchain platform.

4. Use of Proposed Standard or Enhancement (include how the standard will be used, documentation on the description of the proposed standard, any existing documentation of the proposed standard, and required communication protocols):

The creation of a smart contract for the NAESB WGQ Standard No. 6.3.1 – NAESB Base Contract for Sale and Purchase of Natural Gas, along with a standardized modeling language will allow the industry to self-execute those transactions which rely on if-then conditionals, increasing the efficiency of the execution of the contract. The smart contract will run on a private, open-source, inter-operable network with NAESB playing a governance role in user validation through its existing standards. The standard and use case will be refined and validated through a process run by NAESB among industry participants. The initial use case will focus on the settlement process.

5. Description of Any Tangible or Intangible Benefits to the Use of the Proposed Standard or Enhancement:

This proposal will enable market efficiency through an industry-wide, open-sourced, decentralized, private infrastructure for post-trade processing. NAESB standard smart contracts will allow market players to innovate and compete in efficient markets with standardized and secure processes in deal capture, management and settlements:

* Registering and matching trades on privately shared back-office records, without daily or month-end reconciliations
* Actualization of volume & price data
* Automation in settlement & accounting
* Improvements to cash, credit & working capital control
* Fewer faxes & emails, reducing threat from unauthenticated comms
* Providing secure, tamper-proof data for regulators, audits and dispute management
* Higher automation to manage demand seasonality

Easy and secure access via portal and system integration

6. Estimate of Incremental Specific Costs to Implement Proposed Standard or Enhancement:

The cost is indeterminate at this time.

7. Description of Any Specific Legal or Other Considerations:

The NAESB Base Contract for Sale and Purchase of Natural Gas is the property of NAESB and all rights for the use of blockchain shall remain with NAESB.

8. If This Proposed Standard or Enhancement Is Not Tested Yet, List Trading Partners Willing to Test Standard or Enhancement (Corporations and contacts):

Big Data Energy Services – clients, AEP, Adjoint, Pariveda, Tennessee Valley Authority

9. If This Proposed Standard or Enhancement Is In Use, Who are the Trading Partners:

The NAESB Base Contract is in use throughout the natural gas supply chain.

10. Attachments (such as: further detailed proposals, transaction data descriptions, information flows, implementation guides, business process descriptions, examples of ASC ANSI X12 mapped transactions):

[April 5, 2018 Somil Goyal Board Dinner Presentation](https://naesb.org/pdf4/bd040518a1.pdf)