

STATE OF NEW HAMPSHIRE
BEFORE THE
NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

DE 19-197

Electric and Natural Gas Utilities
Development of a Statewide, Multi-use Online Energy Data Platform

DIRECT TESTIMONY OF KAT MCGHEE, M.ED., PMP
MEMBER OF THE LOCAL GOVERNMENT COALITION

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Table of Contents

1. Introduction to Witness:	2
2. Principal Testimony of Witness	3
<i>Q. Please summarize your testimony.</i>	3
<i>Q. What vision will be achieved by building a statewide energy platform?</i>	4
<i>Q. What functionality should the Energy Data Hub initially deliver?</i>	5
<i>Q. How can the PUC define approaches that aid in the success of the software project?</i>	10
3. Statutory Requirements	14
4. Governance – the Critical Element	15

1 **1. Introduction to Witness:**

2 ***Q. Please state your name, business address and occupation?***

3 My name is Kat McGhee. My business address is 33 N State Street, LOB 304, Concord, NH 03301, as
4 a member of the Science, Technology and Energy Committee of the New Hampshire House of Rep-
5 resentatives. By profession, I am a Software Program Manager, retired, I hold a current Project
6 Management Professional (PMP) designation from the Project Management Institute.

7 ***Q. On whose behalf are you testifying in this proceeding?***

8 I am testifying as an Eversource customer and New Hampshire ratepayer on my own behalf
9 and on behalf of the Local Government Coalition. As the chair of the House committee charged with
10 passing the underlying bill (SB284) that initiated this proceeding, I was involved in many meetings
11 and conversations with the Senate and House energy committees who sponsored and passed the
12 bill in 2019. In having worked with the utilities and other energy stakeholders from then until now,
13 I hope to identify both the benefits of the statewide, energy data platform and some of the foreseea-
14 ble obstacles that warrant PUC consideration.

15 ***Q. Summarize your qualifications and experience:***

16 I hold a Master of Education degree from Cambridge College and have held a Project Man-
17 agement Professional designation from the Project Management Institute or the past 16 years. My
18 most recent position was at Skillsoft e-Learning Corporation where I was a Software Program Man-
19 ager in the Program Management Office. I supervised a variety of international, cross-functional
20 teams in the engineering division for Skillsoft. Enterprise-wide project management was my pri-
21 mary role in the prior 15 years of my career at John Hancock Financial Services in Boston where I
22 worked as a dedicated consultant to the Chief Information Officer from the Technical Education
23 Center on Organizational Development My expertise is in the people and process side of making
24 complex, technology-based projects achieve their intended aims. Beyond my professional

1 experience, I have gained knowledge on the New Hampshire and New England energy landscape as
2 both a citizen activist during the Northeast Energy Direct (NED) gas pipeline project and as an com-
3 munity volunteer serving as the Chair of a town task force on the (NED) Kinder Morgan project and
4 the Hollis representative to the Nashua Regional Planning Commissions' Energy Facility Advisory
5 Committee. Interacting with state and regional energy agency leaders and testifying in legislative
6 proceedings on potential energy projects, I built knowledge based on the history and changing
7 characteristics of the New Hampshire energy portfolio and the regional planning efforts of the Inde-
8 pendent System Operators of New England I (ISO-NE).

9 Since joining the Science, Technology & Energy Committee in November of 2018, I have bene-
10 fited from input of energy sector subject matter experts, including the state's utilities, NEPOOL, NH
11 Electricity Coop, Clean Energy NH, and NH DES. I have attended conferences, hearings and work-
12 shops including the most recent 10-year strategic planning session of the ISO-NE in Boston during
13 the fall of last year. During that conference, at which members of both the NH PUC and the NH Office
14 of Strategic Initiatives were in attendance, the keynote speaker (and closing panel) spoke of the
15 need for a tool that that could bring better visibility to the ISO New England and other stakeholders
16 of the distributed energy resources (DER) connected to the distribution grid and the role they play
17 in the New England power system. The keynote speaker spoke candidly about how our lack of en-
18 ergy data insight was the primary impediment holding back the optimization of grid modernization,
19 distributed energy integration and energy efficiency. It is this type of industry knowledge that
20 prompted me to intervene in docket DE19-197.

21 2. Principal Testimony of Witness

22 *Q. Please summarize your testimony.*

23 As a longtime software program manager, my testimony will focus on the insights
24 and approaches I see as necessary in order to launch a successful software project on

1 behalf of the state of New Hampshire. I base my testimony on the knowledge gained from
2 working with the OCA since the spring of 2019 and on the outcomes defined through a pro-
3 cess of creating User Stories during the Technical Sessions by the most active intervenor
4 parties to the DE19-197 docket on the development of an Energy Data Hub (a term coined
5 by Clean Energy New Hampshire). My testimony augments the Local Government Coalition
6 testimony of Clifton Below, Amro Farid, Samuel Golding, and April Salas. In the field of soft-
7 ware project management, defining good processes and hiring the right people are key fac-
8 tors to the success of a project that are often overlooked. The context of the software pro-
9 ject, which is unfortunately being conjoined with the adjudicative process, requires nu-
10 anced approaches to the people and process aspects of its leadership, collaboration, tech-
11 nical decision-making and on-going governance that will shape its success.

12 ***Q. What vision will be achieved by building a statewide energy platform?***

13 A. The meta vision for a statewide energy data platform is that it can portray the distrib-
14 uted energy system beyond traditional electric and gas utility areas and give the state, NH utilities
15 and other energy stakeholders greater knowledge to inform their energy planning decisions and
16 investments. The findings section of SB284, which is Chapter 286:1, NH Laws of 2019, lists the rea-
17 sons for establishment of an energy platform as follows:

18 *I. In order to accomplish the purposes of electric utility restructuring under RSA 374-F, to*
19 *implement fully the state energy policy under RSA 378:37, and to make the state's energy systems*
20 *more distributed, responsive, dynamic, and consumer-focused, it is necessary to provide consum-*
21 *ers and stakeholders with safe, secure access to information about their energy usage. Access to*
22 *granular energy data is a foundational element for moving New Hampshire's electric and natural*
23 *gas systems to a more efficient paradigm in which empowering consumers is a critical ele-*
24 *ment. By enabling the anonymized aggregation of community-level energy data and requiring a*
25 *consent-driven process for access to or sharing of customer-level energy usage data, the state can*
26 *open the door to innovative business applications that will save customers money, allow them to*
27 *make better and more creative use of the electricity grid as well as other utility services, and facil-*
28 *itate municipal and county aggregation programs authorized by RSA 53-E. Such a program of*
29 *robust data is also likely to be useful in local planning, conducting market research, fostering*

1 *increased awareness of energy consumption patterns, and the adoption of more efficient and sus-*
2 *tainable energy use.*

3 *II. Implementation of a multi-use, online data platform is, in light of electric industry re-*
4 *structuring pursuant to RSA 374-F, well-calculated to advance the objectives of recent and ongo-*
5 *ing proceedings at the public utilities commission, including IR 15-296 (Grid Modernization), DE*
6 *16-576 (Alternative Net metering Tariffs), DE 15-137 (Energy Efficiency Resource Standard), and*
7 *DE 17-136 (implementation of Energy Efficiency Resource Standard for 2018-2020).*

8 An automated energy data hub supports all kinds of immediate needs for energy stakehold-
9 ers trying to understand their investments and their overall energy portfolio, but it can also be em-
10 ployed to support automated reporting toward such strategic functions as integrated resource
11 planning, DER load management and asset optimization for greater efficiency and cost savings.
12 These features would be based upon the use of systems data that is not currently agreed to as part
13 of the initial development project. But the intent of a statewide data platform is that it will help
14 drive innovation in NH's energy economy today and support strategic improvements like grid mod-
15 ernization and energy efficiency efforts tomorrow. That means the project itself needs to be con-
16 ceived as a swiss army knife for energy data. In an information age, this means that the Energy Data
17 Hub will be built with a finite set of requirements and achieve a specific set of outcomes, but it will
18 be architected to accommodate new energy data types and sources, along with more robust queries
19 as time and energy management activities require and maintenance costs allow.

20 ***Q. What functionality should the Energy Data Hub initially deliver?***

21 During the Technical collaboration on this docket a finite set of User Stories was developed
22 to define the features of the platform in its initial iteration (See Appendix A to Ethan Goldman's tes-
23 timony). Earlier versions of these User Stories have been widely circulated and acknowledged by
24 most stakeholders in the docket as a reasonable set of clear objectives. That is a huge hurdle toward
25 being able to pursue an RFI/RFP because it clearly defines the outputs of the system and the vari-
26 ous energy data seekers who will be served as well as the systems' attributes required in terms of
27 support for state of art security, data handling, change-management procedures and versioning
28 protocols. The User Stories were developed to be compatible with agile software development

1 methods. Agile software teams use a specific set of methods and tools to achieve rapid turnaround
2 of software that can be tested and improved in a cycle until the defined 'sprint'(bundle of agreed
3 upon requirements for that short development cycle, generally 2-4 weeks) is declared complete.
4 Agile is basically a rapid software development method that focuses a team with all the skills
5 needed to complete the coding, bug fixes and testing, to learn, adapt and move on through the re-
6 quirements leveraging their collaboration as an accelerant. The reason this project lends itself to an
7 agile approach is that this is the most efficient software method to limit the time to market, which
8 in turn limits the cost, while being capable of delivering an innovative and sophisticated data sys-
9 tem where there are lots of unknowns at the outset.

10 The feature definitions listed in RSA 378:51 relate to deliverables of the software aspect of
11 the project. How each will be delivered will come down to the decisions of the software team as
12 part of the development of their project sprints. That sprint plan will define the scope, timeline and
13 cost to deliver the NH Energy Data Hub. If the PUC orders that the project be run using the agile
14 software method, which the utilities software leads have also agreed is the best approach, then by
15 definition, the project will be integrating existing national (Green Button) & logical, energy data
16 model standards (as was recommended by the OCA ; further defined by Dr. Amro Farid) because
17 they are defined in the law as a required outcome .

18 The project will also be required to include: an easy to use interface, supporting relational
19 data-sets, opt-in access/permissions and a data privacy policy consistent with RSA 363:38 , as well
20 the ability to allow for municipal utilities and deregulated rural electric coops to join in the use of
21 the platform and share data subject to conditions... these are the defined deliverables of the system
22 to be developed. These were listed up front as being integral to the success of the software project,
23 but how these features are delivered in a cohesive plan, cannot truly be defined until someone who
24 understands both the software and the energy universe is engaged to lead the project. The point
25 here is that this list, as well as the list in RSA 378:51 (b) specifying the standards to be included:

1 "data accuracy, retention, availability, privacy and security, including the integrity and uniformity of
2 the logical data model, would be incorporated into any software development plan." It should be
3 understood that these lists were included to provide a definitional framework of features that are
4 essential to the proper construction of a state-of-the-art Energy Data Hub; it should not be con-
5 strued as an expectation that the PUC must define the details of these technical aspects of the pro-
6 ject. The PUC would include these terms in a 'make it so' order. If they are listed as requirements of
7 the system, the PUC need not prescribe how the technical team meets those requirements.

8 Because this attempt to combine the extensive work of the OCA and the LGC in defining Use
9 Cases into an initial set of User Stories to supply a clear definition of the outputs of the Energy Data
10 Hub, I believe the User Stories document represent a reasonable universe of system functionality
11 that is easy for non-technical stakeholders to consume. In the Local Government Coalition filings, I
12 am aware that there are additional Use Cases that have been identified that may be appropriate to
13 include in the scope of the initial project, or kept in mind for a future project that requires in con-
14 sideration in the initial system design.

15 At a more granular level of functionality description (as evinced by the User Stories docu-
16 ment) the platform will provide the ability to aggregate (roll up), anonymize (use energy data with-
17 out revealing customer information) and integrate various types of metered electric energy data
18 (electric, gas...) into a format that allows it to be viewed in a meaningful way. This is achieved by
19 adopting a logical data model standard to which each electric data input source conforms, in effect
20 making apples and oranges, appear as all apples for the sake of the energy data system in which the
21 data reside. This provides New Hampshire with the ability to see all of its electric energy inputs
22 combined and not in silos by type or utility area. The ability to define a municipal project, coop, or
23 community power aggregator area in the system will provide the capability to 'see' our energy in
24 the way we need to see it, to undertake meaningful management and to leverage elusive

1 efficiencies. Without this functionality, the project would not meet its defined set of data seeker
2 outputs or its statutory definition.

3 In meetings with the utilities during the Technical Session's phase of the docket, we gained
4 agreement on five energy data hub concepts (though specifics of each remain to be defined and this
5 is largely due to the need for more discussion/collaboration than the process allowed) the fifth be-
6 ing the software project methodology:

- 7 1) a logical data model standard
- 8 2) individual utility customer data
- 9 3) aggregated and anonymized data
- 10 4) an extensible architecture
- 11 5) agile software development method

12 It should also be noted there was a good amount of discussion around the utility-proposed
13 idea of building (or buying) a **virtual platform** (see a more fulsome definition in testimony of
14 Ethan Goldman on behalf of CENH) that uses secure API's to transmit and translate data from dis-
15 parate energy sources into consistent data formats that can then be served up by the Energy Data
16 Hub. This approach has merit in that it adopts an architecture that works well for a nimble hub.
17 The API structure is modular, if you will, and that means problems can be isolated and new func-
18 tionality, easily and cost effectively tacked on as needed. Just as a decision needs to be made on
19 whether to have a *Physical* or *Virtual* platform, the decision of whether to *Build* or *Buy* is also critical
20 to defining the scope, time and cost of this software project. My view is that buying the services
21 from a company or companies that do this work all day long is preferable. They bring a wealth of
22 expertise that can aid in the process and they work under contract for specified outcomes, at a
23 specified price, thus managing the economic risk.

24 This does not preclude the utilities' role by sourcing the software work, in fact, it simplifies
25 the complicated relationship between being asked to design a system for everyone in a

1 marketplace, while being a major competitor in that marketplace. It also allows for a control of the
2 costs by separating the billing for work from the utilities' IT resources to a separate vendor, better
3 from a management perspective as well as separating a single class of stakeholders from the cost to
4 build being passed on to the ratepayer. While on the subject of costs, I do not have enough infor-
5 mation to devote a separate section to the idea of "reasonable usage costs being charged to data
6 seekers as a way of off-setting costs recovered from utility ratepayers." My only comment from a
7 process perspective is that having a fee for service model penalizes some users rather than sup-
8 porting a state sanctioned data service for all where adequate permissions and authorities apply. If
9 we are going to supply access to New Hampshire's energy data, the cost of development and ongo-
10 ing maintenance should be absorbed into the cost of electric utility customer services. It should be
11 viewed as an investment in a modern grid infrastructure.

12 Once an independent technical project leader is hired and put in place, the utilities can es-
13 tablish a management process for partnering with a vendor. The utilities would still be supplying
14 their technical leads to provide oversight of the development and input into the decision-structure,
15 but they would be outsourcing the day to day development rather than assuming a new project for
16 utility IT resources. The view of the required cost for this scale of project, when priced by an en-
17 ergy utility to build in-house vs. a more-nimble utility API company that specializes in this work, is
18 likely not even close. In fact, initial discussions on project cost by the OCA Finance Director revealed
19 that there are vast differences in project pricing depending upon whether or not you are looking at
20 companies who dedicate their business to this type of data project and have a well-defined RFP.

21 There are experts for hire in all of these fields and most utility software data companies
22 have experience with the latest approaches to implementing data access, while providing *safe-*
23 *guarded* data services. So again, we do not have to have to answer these questions to be able write
24 in an order that they be adequately answered within the scope of the project to come. The concept
25 of the platform is embraced by those who long for transparency and innovation and the ability to

1 truly meet the vision of utility market deregulation and modernization. This project may well be
2 equally resisted by those who do not view that 'new energy world' as either preferable (to the sta-
3 tus quo) or profitable.

4 ***Q. How can the PUC define approaches that aid in the success of the software project?***

5 As early as Spring of 2019, I became aware of a challenge to the State's pursuit of SB284.
6 The challenge begins with the non-technical stakeholders trying to properly understand pieces of a
7 software project that cannot be defined without the expertise of a technical software lead or data
8 architect and a project plan. We have been attempting to answer questions that belong in phase 2
9 or 3 of a project, without actually having defined or initiated the project, for as many months as I
10 have been involved. The adjudicative proceeding has added to the conflation of cross-purposes into
11 the process, by asking for levels of detail on various features (change management, security stand-
12 ards, versioning...) because they are defined in the law, but that cannot be answered by anyone but
13 the technical project leader who has not yet been engaged. We cannot price the project without de-
14 fining its scope (deliverables) and timeframe (plan). With the existing high-level system require-
15 ments and the User Stories, it may be possible at the conclusion of discovery to put out RFI/RFPs
16 for cost estimates from companies in the utility data space who do this type of work (configuring
17 API's to translate energy data from source to server). But we should understand that unlike PUC
18 dockets that do not include a software project component, there will be a lot of unknowns in terms
19 of defining how problems should be solved in the automation of New Hampshire's energy data, that
20 cannot and should not be written in stone before the project team is formed. What we have been
21 doing is trying to develop a definitional framework that allows the project its best chance at suc-
22 cess. In this regard, the well-intentioned efforts to include the proper elements of the software pro-
23 ject in the bill and its resulting law, gave us the unintended consequence of forcing the PUC to ask
24 for answers to questions best defined by a process that has not yet begun. This is in effect, a cart be-
25 fore the horse problem.

1 Another area where a clear set of approaches needs definition is in project leadership.
2 There is the natural competition between energy stakeholders and differing views on approach
3 even amongst the 3 major utilities that make assigning them the 'design' responsibility problematic
4 in achieving the project's key objectives. To democratize the state's energy data is a new paradigm
5 and it is not one that the utilities are embracing as a whole. The process of designing and develop-
6 ing a democratized Energy Data Hub must at the very least be objective. This is not to say we should
7 design by committee, that too, is problematic. I suspect the reason the 3 utilities were named as the
8 co-responsible parties for getting the design and operation pieces off the ground is that a project of
9 this complexity must have a defined leader. The utilities have technical expertise, human resources
10 and the ability to recover costs in a state where new budget allocations are a rarity, so they rose to
11 the top of the list, even though they do not all view the ability to provide access to energy data and
12 the attendant loss of control of that data, as a benefit to them or their customers. The lack of leader-
13 ship from the state is also a problem. Stakeholder leadership will be important to governance, but
14 for the software project that designs the energy data hub, it is the abdication of responsibility on
15 the part of the state that yielded project ownership to the utilities. The PUC should consider how
16 this process might be implemented so that the software project decision-making is not without
17 broader input.

18 But events will proceed from the current reality! New Hampshire has no Department of En-
19 ergy, our IT Department is not looking to take on a project of this scale, and in general, the state's
20 inability to supply ownership & leadership for this innovative project has been a glaring issue that I
21 raised in my original scoping document. The greatest challenge of this effort is making sure the us-
22 age of energy data is developed with the needs of all its stakeholders in mind. Although the utilities
23 got the hot potato by statute, the PUC can and should outline a process by which a technical project
24 lead who may be engaged by, but not employed by, the utilities is given the autonomy to manage
25 the project without the influence of any (or all 3), of the major utilities to limit the global benefits of

1 an energy data hub or their competitors ability to utilize the system as intended by legislation and
2 the resulting user stories. This means the design will still be technically under the utilities, but the
3 process will be once removed for the sake of providing a tool that is not biased or limited in per-
4 spective or functionality.

5 Another issue that has arisen in terms of approach is the discussion about the use of sys-
6 tems data. This is another example of how the utilities business philosophy presents a narrowcast
7 understanding of how data can be used, because it reflects their historical perspective and that view
8 is somewhat in conflict with the objectives of the energy data hub. These discussions of what data is
9 needed are appropriate, and they are part of the give and take of defining the project's scope. In a
10 conference call with one of the utilities, a representative expressed the belief that talking about in-
11 cluding systems data was 'dangerous'. This feeling may be derived from a sense in the utility com-
12 munity that systems data must be guarded for security reasons. In that light, it is a reasonable fear
13 from their perspective; however, it belies the fact that New Hampshire is rightly pursuing the abil-
14 ity to keep current with energy data usage and grid modernization efforts being undertaken across
15 the country. Other jurisdictions are grappling with all the same technical challenges from data
16 standards to security – but these are solvable problems that are not preventing states from pursu-
17 ing the ability to make their energy data into actionable information. Some of the utilities agree
18 with this progress and are willing to discuss specific data types that can reasonably be provided
19 and to provide reasons why others might be problematic. But this is an example of the need for an
20 objective technical project leader being inserted into the mix, who is not representing any particu-
21 lar stakeholder perspective or interest, being appointed as soon as possible to take the technical as-
22 pects of the work forward in a stakeholder-agnostic manner.

23 Those of us with software experience have argued that working to exclude certain types of
24 data as a means of minimizing the complexity of the system (and its testing phase) is a less effective
25 approach than defining what the system needs to deliver and then developing the appropriate data

1 architecture to support it. That is how you build a better system. It is not a zero-sum game – but try
2 explaining that to lawyers! If system data is not included in the flagship project, it is important to
3 understand that the extensibility concept is meant to support the capacity for future expansion to-
4 ward enhanced capability when the state is ready to pursue it. There is no bad data and there is no
5 reason to exclude or preclude entire data types simply because it seems to remove complexity. It is
6 a false choice.

7 The approach for designing this energy data tool needs to be consistent with Chapter 286:1,
8 NH Laws of 2019: to create a ***more distributed, responsive, dynamic, and consumer-focused*** state
9 energy data system. Acknowledging that the system will be dynamic tells us that the platform is not
10 intended as a static tool – one and done. The Energy Data Hub acts as a foundation for moving for-
11 ward on New Hampshire’s strategic energy goals and must be designed to adapt to meet future
12 goals as needed. In similar fashion to the requirement for *dynamism* and *extensibility*, the original
13 language identifies the use of *a logical data model standard*, (originally set forth by the Office of the
14 Consumer Advocate), to employ an existing national energy data standard to bring disparate energy
15 data into a common, useful data format that supports robust reporting and analysis. The law also
16 includes the definition of integrating and obtaining certification for the national Green Button
17 standard; this requirement is also included as a way to state that New Hampshire wants to leverage
18 existing energy security, delivery and accuracy frameworks to help us avoid costly reinvention of
19 ‘an available’ wheel.

20 At some point during the proceedings, I started to hear the Energy Data Hub referred to as a
21 customer utility tool. I believe this framing diminishes the original vision set forth in SB284. The
22 ‘customer-focus’ of which I believe the RSA 378:37 language refers are the broad cross section of
23 consumers seeking to produce, manage, sell, smartly consume, and analyze their own energy.

24 Language from Chapter 286:1, NH Laws of 2019 is useful to supply context here:

1 *By enabling the aggregation and anonymization of community-level energy data and re-*
2 *quiring a consent-driven process for access to or sharing of customer-level energy usage*
3 *data, the state can open the door to innovative business applications that will save custom-*
4 *ers money, allow them to make better and more creative use of the electricity grid as well*
5 *as other utility services, and facilitate municipal and county aggregation programs author-*
6 *ized by RSA 53-E.*

7 *Such a program of robust data is also likely to be useful in local planning, conducting mar-*
8 *ket research, fostering increased awareness of energy consumption patterns, and the adop-*
9 *tion of more efficient and sustainable energy use. . . .*

10 *Implementation of a multi-use, online data platform is, in light of electric industry restruc-*
11 *turing pursuant to RSA 374-F, well-calculated to advance the objectives of recent and ongo-*
12 *ing proceedings at the public utilities commission, including IR 15-296 (Grid Moderniza-*
13 *tion), DE 16-576 (Alternative Net metering Tariffs), DE 15-137 (Energy Efficiency Resource*
14 *Standard), and DE 17-136 (implementation of Energy Efficiency Resource Standard for*
15 *2018-2020).*

16 3. Statutory Requirements

17 ***Q. Do you have any concerns about the statutory requirements?***

18 Yes, it is somewhat problematic that the statutory requirements for this docket overlap with
19 the need for a software project that should be independent of any particular energy stakeholder.

20 Under RSA 378:51, “Online Energy Data Platform Established” section 1 charges the commis-
21 sion with requiring “electric and natural gas utilities to establish and jointly operate a statewide,
22 multi-use, online energy data platform.” An important point to reiterate from this initial line is the
23 lack any identified leadership from within the State of New Hampshire governmental framework. If
24 a Department of Energy is hence established, it would be important to make sure they have voice
25 on any pending project and in the ongoing governance for this statewide, energy data hub. Since
26 the impetus for providing broader access to energy data is derived from the changing landscape of
27 the deregulated electricity market and more specifically, RSA 53E:3, it is unfortunate that there is
28 no readily available state agency configured to play a necessary role in the establishment and oper-
29 ation of the data platform. The reason the language might be problematic is that the establishment
30 of the platform needs to be informed by more than the electric and gas distribution utilities. The

1 lens through which the utilities view data access is far too narrow to embrace the needs of the dis-
2 tributed energy market of the present and future.

3 It is true that the utilities play an invaluable role in the state’s ability to establish a data plat-
4 form for its energy needs, but it is important for the PUC to acknowledge that the distribution utili-
5 ties have business incentives that may run counter to the establishment of a truly agnostic energy
6 data hub. For this reason, I want to emphasize that it is only for the state’s lack of a logical home for
7 this project that the language of RSA 378:51-4 installed the utilities to “establish and operate” the
8 platform in RSA378:51 and to “design and maintain” in RSA 378:52. This language does not pre-
9 clude the creation of a coalition of key NH energy stakeholders dedicated to requirements’ defini-
10 tion, vendor selection, Agile project implementation, rollout and communications strategies, estab-
11 lishing change-management and versioning protocols and advocating for the importance of pursu-
12 ing a non-for-profit governance model in the Data Platform Council (terminology from CENH testi-
13 mony). In fact, I would argue that this level of collaboration is essential to the success of the Energy
14 Data Hub in the absence of direct and relevant state leadership.

15 4. Governance – the Critical Element

16 *Q. What factors are necessary for creating a governance model that works?*

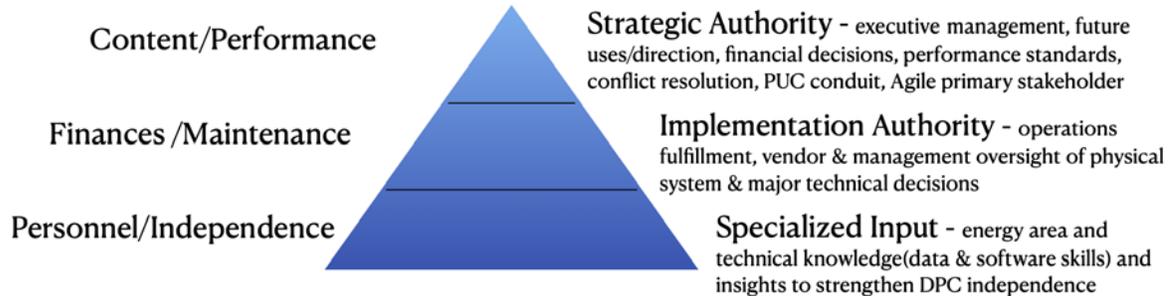
17 On the topic of governance, the place to start is with the timing of the need for oversight and
18 decision-making. In the absence of a ready-made body who has the expertise to properly manage an
19 energy software project (many intervenors were eyeing the formulation of the Grid Modernization
20 Stakeholder Working Group to potentially fulfill this role), it becomes extremely important to look
21 at who is involved in critical decisions, from the start of the resulting order of this adjudicative pro-
22 cess. Defining what types of resources and skills must be represented, identifying those partici-
23 pants and determining an appropriate make up of representative stakeholders is key.

24 In the meetings surrounding the Technical Session calendar, I pulled together some thoughts
25 on Governance to aid a conversation and I am inserting the PDF diagram below. I heard the concern

1 in meetings with the Consumer Advocate that a governance body for the Energy Data Hub would
2 need to have ‘teeth’. To me, that means that both decision-making authority and independence, in-
3 cluding an annual maintenance budget authority would be required to support nimble decisions
4 that avoid bureaucratic delays that incumber efficient response time to critical issues.

5 Before I walk through the processes defined in the high-level diagram below, I want to say that
6 I am in favor of launching the Data Platform Council simultaneous to the launch of the software pro-
7 ject. This means the council will be involved with the project decisions as they evolve and this will
8 help them develop a more sophisticated knowledge of features, issues and requirements. This level
9 setting can only enhance the ability of those who serve as members on the stakeholder council. The
10 timing of forming the Data Platform Council addresses the issue of assigning total authority for de-
11 sign and establishment of the platform to the utilities as that was clearly defined in the absence of
12 any governing mechanism that could be authorized to ensure system decisions are relayed, under-
13 stood and agreed to by a broader coalition of stakeholders to produce the best platform for the New
14 Hampshire energy economy. So while the statute passes the hot potato to the utilities because they
15 were the only available designee at the time the law was conceived and passed, the project success
16 will be predicated on an ability to design and form a meaningful coalition of energy stakeholders
17 who are involved with the platform from the start and for whom sufficient authority is established.

Governance model



NH Data Platform Council

Kat McGhee, NH State Rep 2020

1

2 The top right side of the pyramid starts with **Strategic Authority**: on the left side of the dia-

3 gram are some corresponding components of a highly functioning governance council. They have

4 vision and direction-setting responsibilities for content (which features and capabilities are in-

5 cluded) and performance (the determine whether the platform meets identified standards and

6 whether they must be improved) as they are being defined during the software project develop-

7 ment. This requires governance to include what I've labeled as strategic authority. The council will

8 be semi-autonomous (teeth) in its executive management of the platform: defining future uses, de-

9 livering financial decisions within their budget authority, and voting on conflict resolution. When

10 there are issues that cannot be resolved or that exceed the base line authority of the council's an-

11 nual budget (which is rolling and does not need to be spent, but will be predicated on a reasonable

12 maintenance allowance plus a future-feature fund), then the PUC is to be used as arbiter. This cre-

13 ates ownership and authority and also democratizes control for the platform, while streamlining

14 the red tape to decision-making.

1 The other major consideration for the council would be defining the standards for Data Plat-
2 form Hub performance. I would recommend defining a performance based reward system to create
3 a positive feedback loop for the utilities (as the major data source and platform data intermediary
4 as well as the direct link to any API or platform vendor partner relationship); meeting or exceeding
5 system performance goals around usage, bug fixes/turnaround time for fixes, query response time
6 and processing of requests in general etc., The Data Platform Council will be responsible for defin-
7 ing the performance criteria and assessing whether the utilities are meeting their goals for provid-
8 ing adequate performance as an ongoing exercise. It there is to be a performance based monetary
9 incentive program for the utilities, that would also need to be defined by the DPC.

10 The second rung of the pyramid is defined as **Implementation Authority**. This governs opera-
11 tional fulfillment for the software project and the project as a whole, major vendor or contract deci-
12 sions, management oversight of physical systems issues that require action or technical decisions
13 related to operations maintenance of the system. These are not day to day issues, but rather issues
14 of systemic import. A potential hierarchy for the organizational flow might be: the Data Platform
15 Council is at the top of the organizational chart for oversight of the implementation and manage-
16 ment decisions being made day to day by the utilities and their vendor partners in delivering the
17 Data Platform Hub to market. As an executive body, the council is instilled with the authority to rep-
18 resent the interests of all stakeholders and the energy economy in their perspective and their deci-
19 sion-making. Enabling this type of an org chart hierarchy formalizes the collaborative process, pro-
20 vides it with the necessary 'teeth' and dispels the fear that this will become a utility-only driven
21 project.

22 In order to properly advise and vote on decisions of strategic and technical importance, the
23 council will need to include both executive level and software experienced members. It has been
24 suggested in draft testimony I have seen that the ability for the Data Platform Council to hire
25 needed expertise is an option that will pay for itself as most of the members will likely receive no

1 compensation for their participation. However, it is my contention that the make-up of the council
2 itself needs to address the need for technical experts who can objectively delineate and explain the
3 issues under review. It is very likely that council members from the utilities will include IT candi-
4 dates who are working on or familiar with the Data Platform Hub project. It is essential to counter-
5 balance their perspectives with technical members who are non-utility stakeholders.

6 And that leads into the final rung of this simple pyramid: **Specialized Input** In order for the
7 Data Platform Council to function properly it requires adequate representation of personnel with
8 energy area knowledge (CPA's, municipal & county government, Clean Energy groups, utilities) and
9 of course technology professionals with specialties in data development/management and energy.
10 This make-up serves the purpose of incenting and reinforcing transparency and independence.

11 It is preferable to include technical professionals with an interest in helping the project suc-
12 ceed to hiring someone to attend DPC meetings. But, if we are going to run a successful Agile soft-
13 ware project, then the vendor partner we engage to implement the Data Platform Hub may become
14 the logical participant/representative to report to and inform the DPC on project decisions. This
15 would become part of the RFP to any potential vendor partner who will have to demonstrate their
16 Agile experience. But the agile process features in-person reporting to and sprint-level communica-
17 tion with the '**primary stakeholder**' as part of the agile process. So, for the purposes of the software
18 project, the Data Platform Council must be enacted in tandem with the agile project, in order to per-
19 form the 'primary stakeholder' role. The objective collaboration between the Agile Project Leader
20 and the Data Platform Council as primary stakeholder, creates a level of direct communication that
21 will be essential to a well-run software project.

22 Below you will find an inserted image that details a potential blueprint for the formulation
23 of a Data Platform Council process that is designed to meet these objectives.

Mission Statement: The Platform Data Council (DPC) provides the vision, oversight and functional decision-making for the statewide, multi-use, online energy data platform by supporting the goals of the State of New Hampshire and its energy economy.

Governance categories:

1. Vision/Strategic Direction (Executive)
2. Operational & Performance-Based Oversight (Functional)

Function #1: Vision/Strategic Direction

- **Who:** 13 member Data Platform Council guides the strategic direction of the platform in line with its full potential for the State of New Hampshire
 - 6 energy stakeholder members: 3 of whom have technical or software experience sufficient that they can contribute to discussions/decisions around technology and implementation (potential pool of candidates: DE 19-197 working group; grid mod working group); energy stakeholders should include no less than 1 NH community power planner
 - 4 utility members (1 per utility, plus 1 technical lead)
 - 2 State of NH members (Dept of Energy, OCA, PUC, ST&E etc.)
 - 1 Ratepayer member
- **What:** (2 key activities)
 1. **Implement existing order/scope**
The governance board will:
 - provide prioritization of outcomes at sufficient levels of granularity to create meaningful project sprints for an Agile software project
 - determine a baseline vision/scope for the initial project & timeframe
 - develop an RFP process to determine ideal value (build/buy)
 - define agile project work team and regular reporting schedule
 - act as 'primary stakeholder' for the platform project
 - provide PUC with initial project cost and annual budget estimate
 - define Data Platform Hub standards of performance and points of intervention for the PUC for non-performance
 2. **Prioritize/propose new orders to expand initial platform scope**
 - Board will prioritize and propose new functionality (consensus and non-consensus recommendations) based on the broader interests of all stakeholders for future feature needs
 - **Recommend new orders to expand Hub scope:** PUC Commission approval prior to initiating new projects beyond initial scope
 - Board to recommend new projects via subsequent orders
- **How: Decision-Making process:**
 3. **Implement existing order/scope:** Binding board vote - does not require PUC involvement. The Platform Governance Board requires an annual budget to support operational decision-making.

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2 **4. Conclusions – Collaboration is the point**

3 ***Q. Do you have any closing remarks?***

4 As an intervenor with the Local Government Coalition I am inclined to say a word about
5 how our local governments will be buoyed by the advancement of a true Data Platform Hub. As

1 April Salas' testimony reflects, we very much take for granted that everyone will make-due in New
2 Hampshire, without much attention to well-designed systems or useful resources. Our inability to
3 perform seemingly simple tasks in order to improve our use of energy and make progress against
4 climate plans that are required by the state are also an important impetus for the Data Platform
5 Hub project. The economic benefits of taking this technological step are difficult to quantify; it is
6 much like our inability to perceive how the telephone would facilitate streamlined communication,
7 commerce and ultimately pave the way for other disruptive and transformative technologies, be-
8 fore we decided to make access to that enabling technology readily available.

9 It's about dipping a strategic toe into the world of information systems and creating an abil-
10 ity for New Hampshire to leverage a small investment for a huge energy and environmental return.
11 Creating the ability to measure and manage our energy data is the future. It is through foresight and
12 forbearance and sheer will (our only plentiful resources!) that we have pulled together a concept
13 that puts New Hampshire in a position to define a better platform than some who came before us,
14 California, Texas and New York most recently come to mind. But I'm sure there are many more ex-
15 amples of states who recognize that defining a proper window into their changing energy landscape
16 is essential and rudimentary. It is not far-fetched or overly ambitious to recognize that the opportu-
17 nities of our investments in our energy economy will only be realized when we have the ability to
18 understand where we are, where we want to go, and how best to get there. That is what access to
19 our energy data promises.

20 I thank you for your time and indulgence and realize that it is a tricky dance to try to navi-
21 gate through a unique proceeding that is not designed to allow for some of the very critical pieces
22 this data project requires.

23 It is further appropriate to say that my time intervening on this project has renewed my
24 faith that there is such a thing as self-interested altruism. Unlike me, an Eversource customer, com-
25 munity representative and member of Science, Technology & Energy Committee who couldn't find a

1 way out of seeing this valuable project through, there are many who have devoted countless hours,
2 with no remuneration, to see this innovative project through to its potential.

3 If it sometimes seems as if the intervenors and the utilities are talking about different pro-
4 jects, then I feel the case before you has been made. I have great respect for our utility providers
5 and for their participation in this process. They have a great deal of value to add to the project and
6 it is to their credit that they have made time for numerous adjunct meetings to ease communication
7 between the parties and offer their input.

8 The concept of collaboration is my concluding point. We have seen that getting on the same
9 page requires a process that supports vehicles for building understanding. It takes longer, and
10 greater inclusion to make a collaborative process succeed. But it is also the way we secure the most
11 powerful result. Asking the questions until we understand each other's perspectives gets us to the
12 sweet spot of actual progress. What are your needs? What are your desires? What are your con-
13 straints? How do we get the greatest return on our investment? What are the opportunity costs if
14 we delay making this happen now? What are the potentials we aim to reach? How do we create the
15 balance needed for healthy collaboration?

16 You are charged with balancing our concerns for this collaboration, managing expectations
17 and producing the best outcome for New Hampshire consumers and communities. I hope that my
18 testimony provides food for thought and aids you in your charge.

19 Thank you for the opportunity to submit my testimony.