

Decision 22-06-004 June 2, 2022

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

Application of the California Energy  
Commission for Approval of the  
Electric Program Investment Charge  
Proposed 2021-2025 Investment Plan.

Application 21-11-021

**DECISION APPROVING THE CALIFORNIA ENERGY  
COMMISSION'S EPIC 4 INVESTMENT PLAN AND REQUIRING  
MODIFICATIONS**

## Table of Contents

Title	Page
DECISION APPROVING THE CALIFORNIA ENERGY COMMISSION’S EPIC 4 INVESTMENT PLAN AND REQUIRING MODIFICATIONS.....	1
Summary .....	- 2 -
1. Procedural Background .....	- 3 -
2. The EPIC Program.....	- 4 -
3. EPIC 4 Program .....	- 6 -
4. Request.....	- 8 -
5. Discussion.....	- 8 -
5.1. Jurisdiction and Applicable Guidelines .....	- 8 -
5.2. Overview of the Plan.....	- 12 -
5.3. Plan Details .....	- 13 -
5.4. Comments from Parties .....	- 15 -
5.4.1. R&D Topic 42.....	- 16 -
5.4.1.1. Energize Innovation .....	- 18 -
5.4.1.2. Empower Innovation .....	- 18 -
5.4.1.3. EPIC Symposium.....	- 19 -
5.4.1.4. Empower Innovation Events .....	- 20 -
5.4.1.5. Summary.....	- 21 -
5.4.2. R&D Topic 6.....	- 22 -
5.4.3. Identification of Program Areas.....	- 24 -
5.4.4. Identification of Amount of Funds .....	- 26 -
5.5.1. Clarity Regarding Possible Duplication .....	- 27 -
5.5.2. Increased Coordination.....	- 28 -
5.5.3. Additional Funding Details .....	- 30 -
5.6.1. Compliance with New Administrative Budget Framework .....	- 33 -
5.6.2. Compliance with ESJ Action Plan.....	- 34 -
Findings of Fact .....	- 38 -
Conclusions of Law.....	- 43 -
ORDER.....	- 46 -

**DECISION APPROVING THE CALIFORNIA ENERGY  
COMMISSION'S EPIC 4 INVESTMENT PLAN AND REQUIRING  
MODIFICATIONS**

**Summary**

Today's decision approves the Electric Program Investment Charge 2021 to 2025 (EPIC 4) Investment Plan filed by the California Energy Commission (CEC) in this application subject to several modifications.

CEC is required to file a Tier 2 advice letter to make the following changes:

- a. CEC shall utilize funds from the administrative portion of the EPIC 4 budget to fund activities for Research and Development (R&D) Topic 42. Activities under this research topic are deemed administrative in nature. Funds that were originally earmarked for these activities shall instead be reallocated to other research topics. CEC shall inform the Commission how it plans to reallocate such funds and provide the need and justification of such costs. However, if CEC can demonstrate with data as described in this decision how Empower Innovation and other individual Topic 42 activities will advance market facilitation and benefit ratepayers, then this area can be funded using non-administrative funds;
- b. CEC shall explain how R&D Topic 9 is distinct from Topic 8. Alternatively, the two topics can be combined, and any budget reallocation should be explained and justified;
- c. CEC shall explain how R&D Topic 22 is distinct from Topic 14. Alternatively, the two topics can be combined, and any budget reallocation should be explained and justified;
- d. R&D Topic 45 should be revised in order to explain why it is not duplicative of existing federal tools; and
- e. CEC shall provide more information regarding funding allocation of Strategic Objectives that are supported by a single Strategic Initiative.

In addition, CEC shall coordinate with the Commission periodically, as guided by the Commission's Energy Division, regarding proceedings and related Commission programs that have linkages with the research topics included in the EPIC 4 Plan.

Except for the above modifications, the EPIC 4 Plan complies with the EPIC filing requirements established in Decision (D.) 12-05-037 and relevant decisions that modified it such as D.20-08-042, which required that information regarding funding shall be at the Strategic Initiative level.

The EPIC 4 Plan also complies with Pub. Util. Code § 740.1 and § 8360, and CEC's administration of the EPIC program pursuant to the requirements under Public Resources Code 25710 *et seq.* The plan is reasonably expected to provide benefits to electricity ratepayers, defined as improving safety, increasing reliability, increasing affordability, improving environmental sustainability, and improving equity, all as related to California's electric system. Finally, the plan supports several of the nine goals of the Commission's Environmental and Social Justice Action Plan.

Authority to continue EPIC in 2021 to 2025 as well as its annual funding of \$147.26 million were already authorized by the Commission in D.20-08-042. In addition, an interim EPIC 4 Plan for 2021 was already authorized in D.21-07-006. Thus, what is specifically being authorized in this decision is year two to five of the EPIC 4 Plan for 2022 to 2025. And as stated above, the total budget for these four years of \$592 million was already authorized in D.20-08-042.

## **1. Procedural Background**

On November 23, 2021, the California Energy Commission (CEC) filed Application (A.) 21-11-021 for approval of its proposed Electric Program Investment Charge 2021 to 2025 (EPIC 4) Investment Plan.

On December 30, 2021, a protest to the application was filed by The Public Advocates Office (Cal Advocates).

CEC filed a reply to Cal Advocates' protest on January 10, 2022.

On February 3, 2022, a prehearing conference (PHC) via WebEx was held to gather information about the scope, schedule, and other procedural matters.

On February 10, 2022, the assigned Commissioner issued a Scoping Memorandum and Ruling (Scoping Memo) setting forth the scope and procedural schedule for the proceeding.

Opening Briefs were filed by CEC and Cal Advocates on March 1, 2022.

Reply Briefs were filed by CEC and Cal Advocates on March 10, 2022.

On March 22, an administrative law judge (ALJ) ruling was issued requesting additional information. CEC filed a supplement to the application on April 1, 2022 in response to the ruling.

## **2. The EPIC Program**

EPIC was established by the Commission in 2011 to fund research leading to technological breakthroughs supporting California's clean energy goals with a focus on providing ratepayer benefits which include greater reliability, lower costs, and increased safety.<sup>1</sup>

Partly as a response to the then Governor's request to "take action under the Commission's authority to ensure that programs like those supported by the Public Goods Charge are instituted well as ways to create jobs swiftly through investment in energy savings retrofits,<sup>2</sup> the Commission opened Rulemaking (R.) 11-10-013 on October 6, 2011 to determine whether and how the

---

<sup>1</sup> EPIC 4 Plan abstract at iii.

<sup>2</sup> D.12-05-037 at 4.

Commission should act to preserve funding for the public and ratepayer benefits associated with renewables and research, development, and demonstration (RD&D) activities provided by the electric Public Goods Charge (PGC) under Pub. Util. Code § 399.8.<sup>3</sup>

In D.11-12-035,<sup>4</sup> the Commission established an interim funding level for RD&D and renewables programs by requiring the three largest electrical Investor Owned Utilities (IOUs) in California namely, Pacific Gas & Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) (collectively IOU) to impose a new surcharge to its electric customers called EPIC.<sup>5</sup> The EPIC charge which will be recovered through the public purpose program (PPP) rate component of a customer's bill.<sup>6</sup>

Following the above, the Commission issued D.12-05-037 identifying the potential approach to EPIC governance as well as the programmatic and ratepayer funding activities that EPIC would invest in.<sup>7</sup> The EPIC programs were divided into three program areas: (a) applied research and development; (b) technology demonstration and deployment; and (c) market facilitation.<sup>8</sup> D.12-05-037 also designated CEC and the IOUs as administrators of the EPIC

---

<sup>3</sup> Pub. Util. Code § 399.8 provides that: "(a) In order to ensure that the citizens of this state continue to receive safe, reliable, affordable, and environmentally sustainable electric service, it is the policy of this state and the intent of the Legislature *that prudent investments in energy efficiency, renewable energy, and research, development and demonstration shall continue to be made.*"

<sup>4</sup> D.11-12-035 was the Phase 1 decision in R.11-10-013.

<sup>5</sup> D.11-12-035 OP 2 at 40.

<sup>6</sup> D.11-12-035 at 32.

<sup>7</sup> D.12-05-037 at 5.

<sup>8</sup> D.20-08-042 at 4.

program and required IOUs to file coordinated triennial applications before the Commission that provide their investment plans for EPIC through 2020.<sup>9</sup>

To date, the Commission has authorized three EPIC investment plans. EPIC 1 concerned investment funds collected from 2012 to 2014 and was authorized in D.13-11-025.<sup>10</sup> The EPIC 2 investment plan (2015 to 2017) was authorized in D.15-09-005 and D.15-04-020, while EPIC 3 (2018 to 2020) was authorized in D.18-01-008 and D.18-10-052.

### **3. EPIC 4 Program**

D.12-05-037 authorized the EPIC program to continue until 2020. After the conclusion of the EPIC 3 proceeding, it became a question as to whether the EPIC program should be renewed and if so, for how long. The Commission opened R.19-10-005 on October 10, 2019, to resolve this issue as well as to determine the funding level and potential structural and administrative improvements for EPIC if it were to continue.

Subsequently, in D.20-08-042, which was an interim decision in R.19-10-005, the Commission authorized the continuation of the EPIC program for another 10-year period, from 2021 until 2030.<sup>11</sup> The Commission determined that it was reasonable to renew EPIC because the program benefits electric IOU ratepayers and California in addressing wildfire risk, meeting climate goals, creating job growth, and other benefits based on quantifiable results from the previous EPIC programs.<sup>12</sup> EPIC also provides electric utility ratepayer benefits,

---

<sup>9</sup> D.12-05-037 OP 11 at 102.

<sup>10</sup> D.13-11-025 OP 2 at 134.

<sup>11</sup> D.20-08-042 OP 1 at 32.

<sup>12</sup> D.20-08-042 at 17.

energy innovations, helps the state meet its energy policy goals, and other broader benefits.

The Commission also determined that the application and investment cycles for the EPIC program should be increased from three-year periods to five-year periods. The Commission reasoned that a five-year program offers greater flexibility to the EPIC administrator and gives the Commission better opportunity to oversee the program.<sup>13</sup>

CEC was designated to continue to administer its portion of EPIC as a grant in accordance with Commission-approved investment funds.<sup>14</sup> Funding for CEC's portion of EPIC was authorized at the amount of \$147.26 million annually with possible adjustment for inflation for the 2026 to 2030 period.<sup>15</sup> Finally, CEC was directed to file an EPIC 4 application on October 1, 2021 for the 2021 to 2025 period, and an EPIC 5 application by October 1, 2025 for the 2026 to 2030 period<sup>16</sup>

On July 15, 2021, the Commission issued another interim decision in R.19-10-005, D.21-07-006. In this decision, the Commission approved CEC's interim EPIC Investment Plan for a 12-month period beginning January 1, 2021.<sup>17</sup> According to the Commission, approval of the 2021 interim plan ensures project continuity from the end of the EPIC 3 plan which ended in 2020 and because the CEC's EPIC 4 application was not due to be filed on October 21, 2021.<sup>18</sup>

---

<sup>13</sup> *Ibid.*

<sup>14</sup> D.20-08-042 OP 2 at 32.

<sup>15</sup> D.20-08-042 OP 3 at 32.

<sup>16</sup> In its EPIC 5 application, the CEC is allowed to request an adjustment for inflation for years 2026-2030, per D.20-08-012 at. 22.

<sup>17</sup> D.21-07-006 OP 2 at 12.

<sup>18</sup> The deadline was extended to December 1, 2021 in D.21-11-028 OP 14 at 58.



#### **4. Request**

In this application, CEC requests approval of its EPIC 4 investment plan for 2021 through 2025 pursuant to the Commission's order in D.20-08-042. While D.20-08-042 authorizes funding for CEC's portion of EPIC 4 from 2021 through 2025, it does not approve the actual investment plan to administer those funds.

Thus, the EPIC 4 Plan in this application sets forth how CEC will administer its portion of the approved funding for EPIC 4 which is \$147.26 million annually. Because the interim plan for administration of funds for 2021 was already authorized in D.21-07-006, the total budget covered in this application is \$592 million, which represents \$147.26 million annually from year two to year five of EPIC 4 or from 2022 to 2025.

#### **5. Discussion**

##### **5.1. Jurisdiction and Applicable Guidelines**

The Commission has authority over this application pursuant to Pub. Util. Code § 399.8 which allows the Commission to create policies and regulations pertaining to energy efficiency, renewable energy, and research and development and demonstration. Funding of these programs are to be collected by the IOUs from its customers through non-bypassable system benefits charge.<sup>19</sup>

The Commission shall evaluate proposed programs and how funding shall be distributed taking into consideration the guidelines set forth in Pub. Util. § 740.1 which reads as follows:

The Commission shall consider the following guidelines in evaluating the research, development, and demonstration programs proposed by electrical and gas corporations:

---

<sup>19</sup> (Pub. Util.) Code § 399.8 (a), (b), (c).

- a. Projects should offer a reasonable probability of providing benefits to ratepayers.
- b. Expenditures on projects which have a low probability for success should be minimized.
- c. Projects should be consistent with the corporation's resource plan.
- d. Projects should not unnecessarily duplicate research currently, previously, or imminently undertaken by other electrical or gas corporations or research organizations.
- e. Each project should also support one or more of the following objectives:
  - 1. Environmental improvement.
  - 2. Public and employee safety.
  - 3. Conservation by efficient resource use or by reducing or shifting system load.
  - 4. Development of new resources and processes, particularly renewable resources and processes which further supply technologies.
  - 5. Improve operating efficiency and reliability or otherwise reduce operating costs.<sup>20</sup>

In addition, Pub. Util. § 8360 also provides that it is the policy of the state to modernize the state's electrical transmission and distribution system to maintain safe, reliable, efficient, and secure electrical service with infrastructure that can meet future growth in demand.

The Commission established the EPIC Program for the purpose of funding electric public interest investments for the benefit of electricity ratepayers and ordered that this program shall fund investments in the following areas:

---

<sup>20</sup> Pub. Util. Code § 740.1.

a) applied research and development; b) technology demonstration and deployment; and c) market facilitation.<sup>21</sup>

D.12-05-037 provides more specific guidelines on what the EPIC applications should include such as proposed funding levels for particular program areas, policy justification for the funding allocation proposed, and a mapping of the planned investments to the electricity system value chain.<sup>22</sup> As clarified in D.21-07-006, D.12-05-037 remains in effect and provides no explicit sunset on EPIC investment plan requirements even though the decision only scheduled investments through 2020.<sup>23</sup>

The guidelines in D.12-05-037 have since been modified by subsequent decisions such as D.21-11-028 which required that funding be proposed at a strategic initiative level<sup>24</sup> that is more granular than the program area level with specification on how these initiatives will be operationalized by investment plan proposed activities.

In D.12-05-037, the Commission adopted the following primary and mandatory guiding principle of the EPIC program: provide electricity ratepayer benefits, defined as promoting greater reliability, lower costs, and increased safety, with the following complementary guiding principles: a) Societal benefits; b) Greenhouse gas emissions mitigation and adaptation in the electricity sector at the lowest possible cost; c) The loading order; d) Low-emission

---

<sup>21</sup> D.12-05-037 OP 3 at 100; Area in Market Support was not funded unless the Commission modifies the requirement during the consideration of an investment plan, Per D.12-05-037 Ordering Paragraph (OP) 4 at 100.

<sup>22</sup> D.12-05-037, OP 12 at 102.

<sup>23</sup> D.21-07-006 at 10.

<sup>24</sup> D.21-11-028 at 17 and OP 8 at 57. Strategic initiatives are defined as the core approaches to meeting goals that are set at the strategic objective level.

vehicles/transportation; e) Economic development; and f) Efficient use of ratepayer monies.<sup>25</sup> D.21-11-028 adopted several clarifying revisions to the guiding principles and the EPIC mission statement, removing the non-mandatory complementary principles and streamlining existing mandatory guiding principles.<sup>26</sup>

Further, D.12-05-037 states that EPIC investment plans should also include:

- a. A mapping of the planned investments to the electricity system value chain.
- b. Identification of at least the following elements:
  - i. The amount of funds to be devoted to initiatives;
  - ii. Policy justification for the funding allocation proposed;
  - iii. The type of funding mechanisms to be used for each investment area;
  - iv. Eligibility criteria for award of funds in particular areas;
  - v. Any suggested limitations for funding (technologies, approaches, program area, etc.), and
  - vi. A summary of stakeholder comments received during the development of the investment plan and the administrator's response to the comments
- c. Metrics against which the investment plan's success should be judged, including at least the following:
  - i. Quantification of estimated benefits to ratepayers and to the state.
  - ii. Identification of barriers or issues resolved that prevented widespread deployment of technology or strategy.
  - iii. Effectiveness of information dissemination;
  - iv. Adoption of technology, strategy, and research data by others.

---

<sup>25</sup> D.12-05-037 OP 2 at 99.

<sup>26</sup> D.21-11-028 at 39-43 and at A1-A2.

- v. Funding support from other entities for EPIC-funded research on technologies or strategies.
- d. A recommended approach to intellectual property rights depending on the specific types of projects and funding proposed.
- e. How the investment plan addresses the principles articulated in Public Utilities Code Sections 740.1 and 8360.<sup>27</sup>

## 5.2. Overview of the Plan

The EPIC 4 program contains six strategic objectives and nine initiatives. The table below shows these six objectives and under which objective each of the nine initiatives fall under. The table also shows the proposed funding for each initiative for years two to five.

Strategic Objective	Initiatives	Funding
Accelerate advancements in renewable generation technologies	Renewable Generation	\$52 million
Create a more nimble grid to maintain reliability as California transitions to 100% clean energy	Clean, Dispatchable Resources	\$55 million
	Grid Modernization	\$27.24 million
Increase the value proposition of distributed energy resources to customer and the grid	Distributed Energy Resource Integration and Load Flexibility	\$86 million
	Transportation Electrification	\$59 million
Improve the customer value proposition of end-use efficiency and electrification technologies	Industrial Decarbonization	\$46 million
	Building Decarbonization	\$60 million
Enable successful clean energy entrepreneurship across California	Technology to Market	\$82 million
Inform California's transition to an equitable, zero-carbon energy system that is climate resilient and meets environmental goals	Climate and Environment	\$33 million
Total		\$500.24 million

<sup>27</sup> D.12-05-037 OP 12 at 102-103.

The plan also includes \$88.8 million (15 percent) in CEC administration costs and \$2.96 million for CPUC administration costs.<sup>28</sup> In addition, CEC is also allowed to reallocate up to 15 percent of funds among each of their approved initiatives without additional Commission approval pursuant to D.21-11-028.<sup>29</sup>

### **5.3. Plan Details**

Details concerning the EPIC 4 Plan are located in Chapters 2 to 7 of the plan while Chapter 8 contains details regarding the plan administration.

Chapter 2 is entitled Accelerate Advancements in Renewable Generation Technologies, describes research and development (R&D)<sup>30</sup> activities for several key renewable energy technologies, including solar photovoltaics, offshore wind, geothermal energy generation, and mineral recovery technologies. All of the topics in this chapter fall under the Renewable Generation initiative.

Chapter 3 is entitled Create a More Nimble Grid to Maintain Reliability as California Transitions to 100% Clean Energy. This chapter contains research topics that will help develop the technologies and modeling analyses that enable a more nimble electric grid that is reliable, cybersecure, and decarbonized. This includes various types of energy storage technologies that support grid reliability, green hydrogen energy system technologies, and grid modernization initiatives. The research topics in this chapter fall under the Clean, Dispatchable Resources and Grid Modernization initiatives. CEC plans on collaborating with

---

<sup>28</sup> D.21-11-028 OP 5 at 56.

<sup>29</sup> D.21-11-028 OP 10 at 57.

<sup>30</sup> The application refers to the EPIC topics found in Chapters 2 to 7 as R&D Topics and this decision shall follow this designation for convenience. However, we note that Pub. Util. Codes § 399.8 and § 740.1 as well as D.12-05-037 refer to these as research, development, and demonstration or RD&D Topics.

IOUs and the Commission with respect to support with facilitating projects, interconnection, and coordination.<sup>31</sup>

Chapter 4 is entitled Increase the Value Proposition of Distributed Energy Resources to Customers and the Grid, contains research topics in the efforts to advance the integration of distributed energy resources (DER) into the distribution system. This includes enhancing cost and performance attributes and realizing the full range of benefits for customers and the grid. Specific areas of focus include enabling reliability and resiliency with load flexibility; advancing planning tools and technologies to improve DER efficiency, operation, and integration; and improving DER communication and control technologies. Chapter 4 also contains transportation electrification initiatives such as research topics on aligning the growing transportation electrification market with grid needs, exploring opportunities to recycle and reuse critical materials, and exploring innovative financing and business models.

Chapter 5 is entitled Improve the Customer Value Proposition of End-Use Efficiency and Electrification Technologies. This chapter focuses on technology advancements in energy efficiency and electrification of the industrial and building sectors. The research topics included in this chapter fall under the Building Decarbonization and Industrial Decarbonization initiatives which aim to improve the customer value proposition of end-use efficiency and electrification technologies in the industrial and building sectors.

Chapter 6 is entitled Enable Successful Clean Energy Entrepreneurship Across California. This chapter contains R&D topics that will continue to support entrepreneurial ecosystem programs started under previous investment plans

---

<sup>31</sup> EPIC 4 Investment Plan, p. 42.

but adds new components to address additional barriers affecting the clean energy start-up sector. This includes supporting advanced battery scale-up in California as current lithium-ion batteries are starting to reach performance limitations. All of the topics fall under the Technology to Market initiative.

Chapter 7 is entitled Inform California's Transition to an Equitable, Zero-Carbon Energy System that is Climate-Resilient and Meets Environmental Goals. This chapter includes research that will evaluate and address equity, employment, health, and other distributional benefits and costs of clean energy pathways. Updated frameworks to address climate change and realizing a climate resilient and reliable grid are also part of this chapter. All research topics such as evaluating air quality, clean energy solutions, integrating climate resilience in electricity systems, and advancing the environmental sustainability of energy deployments are part of the Climate and Environment initiative.

#### **5.4. Comments from Parties**

In its opening and reply briefs, Cal Advocates identified several deficiencies in the EPIC 4 Plan and recommended modifications to the plan. Specifically, Cal Advocates recommended denial of Research and Development (R&D) Topic 42 because it funds administrative activities; it also recommended denial of R&D Topic 6 because it is duplicative of research undertaken by IOUs or research organizations. Cal Advocates also states that each strategic initiative or R&D topic should be linked to a specific program area to improve transparency and that amounts devoted to particular program areas should be identified.

CEC refutes all claims made by Cal Advocates and argues that R&D Topic 42 falls within the Market Facilitation program area and that Topic 6 is complementary to prior research. CEC also states that the EPIC 4 Plan proposes



research topics that are consistent with approved program areas and that the budget presented complies with Commission direction. Finally, CEC states that the plan complies with the requirements set forth in D.12-05-037 and the relevant decisions that have modified D.12-05-037.

#### **5.4.1. R&D Topic 42**

Cal Advocates states that Topic 42 titled “Events and Outreach” should be disallowed because it does not meet EPIC’s defined program area activities for R&D investments and instead qualifies as an administrative cost. Therefore, funds earmarked for administrative costs should be used instead and funds earmarked for Topic 42 should be reallocated to other areas that will provide benefits to ratepayers.

Cal Advocates further explains that in response to discovery, CEC states that administrative activities under EPIC 4 are broader in scope and are performed by CEC’s EPIC staff. On the other hand, activities under Topic 42 are much narrower in scope such as the EPIC annual symposium and online platform support and these activities will be conducted by a contractor selected through a solicitation process.

CEC states that funding for Topic 42 would allow it to carry out activities such as the EPIC Symposium, technology forums, innovation tours, and manage its online platforms. It adds that such activities fall within Market Facilitation. It then cites specific activities such as targeted outreach, entrepreneurial assistance, and program tracking.

In our review, we first analyzed Topic 42 as presented in the EPIC 4 application and then considered the arguments raised by both Cal Advocates and CEC. There are four primary activities under Topic 42: (a) Energize

Innovation; (b) Empower Innovation; (c) EPIC Symposium; and (d) Empower Innovation Events.

We shall discuss each topic but focus our analysis on whether said activities are administrative in nature since this is the root of Cal Advocates' objection to Topic 42.

Administrative costs, for EPIC purposes, were defined in D.12-05-037 and we find no reason to depart from the determinations made in said decision. Among other things, the Commission deemed that costs to prepare investment plans and costs to monitor and oversee the progress of projects are administrative costs.<sup>32</sup> Costs to evaluate programs, however, are not deemed administrative in nature.<sup>33</sup> The definition of administrative costs was further clarified in D.15-04-020 where the Commission agreed with CEC that program planning, workshops, and reporting are administrative activities. The decision also clarified that direct, necessary, and technical coordination that contributes directly to projects are not administrative costs and that the nature of the activities performed are not based on whether the activities were specific to a project.<sup>34</sup>

We agree with Cal Advocates that narrowing the scope of activities will not change their characterization if such activities fall within a much broader scope of administrative activities. Also, the fact that a contractor will be performing the activities as opposed to in-house EPIC administrative staff, does not change the nature of said activities.

---

<sup>32</sup> D.12-05-037 at 65 to 66.

<sup>33</sup> *Id* at 66.

<sup>34</sup> D.15-04-020 at 38 to 40.

#### **5.4.1.1. Energize Innovation**

Energize Innovation pertains to a website that will showcase CEC's EPIC projects and provide high-level information about EPIC investment areas and news about events. The website appears to be a reporting platform wherein the status and results of EPIC projects are posted. The projects are reported individually and include an overview and summary.

We find that maintaining this website and ensuring that information is current and up-to-date is administrative in nature pursuant to D.15-04-020 which considers monitoring, overseeing, and reporting as administrative in nature.<sup>35</sup> There does not appear to be any program evaluation involved, which D.12-05-037 clarified to be an activity that is non-administrative,<sup>36</sup> or program tracking, which is deemed part of Market Facilitation.<sup>37</sup>

In addition, the website does not identify itself as being affiliated with EPIC and allows reporting of projects other than EPIC even though a majority of the reports that are in the platform are EPIC projects. Aside from using administrative funds for this activity, CEC should also inform the Commission whether such costs should be pro-rated considering that other non-EPIC entities can also post their own projects and data to this online platform which the CEC appears to be maintaining.

#### **5.4.1.2. Empower Innovation**

Empower Innovation is described as an online platform that will serve as an access point for entrepreneurs, investors, and others to connect as potential project partners in clean energy technology development and deployment.

---

<sup>35</sup> D.15-04-020 at 40.

<sup>36</sup> D.12-05-037 at 66.

<sup>37</sup> D.12-05-037 OP 3 at 100.

While the objectives for Empower Innovation seem to fall under activities that support market facilitation, CEC should demonstrate clearly that this activity goes beyond merely overseeing and maintaining this online platform.

Currently, the online platform only includes a small percentage of EPIC-related funding opportunities. There is also little indication that the platform is related to or tied to EPIC. Therefore, the EPIC 4 application must be supplemented to demonstrate more clearly CEC's role regarding the online platform, how it will advance market facilitation of EPIC programs, and how the platform will benefit ratepayers. CEC should also explain if and how costs for this program need to be appropriately pro-rated. Otherwise, CEC should use administrative funds for this program and reallocate funds originally earmarked for this program to other research topics.

#### **5.4.1.3. EPIC Symposium**

In D.15-04-020, the Commission approved SCE's proposal for an annual California EPIC Symposium<sup>38</sup> and directed EPIC Administrators to coordinate, with input from Energy Division, to host an annual EPIC Innovation Symposium beginning in 2015. The Commission further specified that this symposium shall be part of their normal administrative duties,<sup>39</sup> and added that this symposium may be used to satisfy one of the two annual workshops required to be held pursuant to D.12-05-037<sup>40</sup> and CEC has in fact been using this annual symposium to fulfill one of the two workshop requirements each year. The EPIC Symposium under Topic 42 is the very same symposium discussed in D.15-04-020. Therefore, it follows that because this is a normal administrative activity, then costs for

---

<sup>38</sup> SCE Amendment to Application A.14-05-005 at 42.

<sup>39</sup> D.15-04-020 OP 27 at 66.

<sup>40</sup> D.12-05-037 OP 15 at 104 to 105.

planning and holding this annual symposium should be accounted for in CEC's administrative budget for EPIC 4.

#### **5.4.1.4. Empower Innovation Events**

Empower Innovation Events are aimed at leveraging interactive tools to support increased engagement and transparency for EPIC investment planning and potential funding opportunities. CEC clarifies that these events include planning, managing, and conducting topical forums and managing innovation-related websites.

However, in the Program Administration section of the EPIC 4 Plan found in Chapter 8, the Empower Innovation Events are identified as an important administrative component of CEC's EPIC outreach and stakeholder engagement strategy in terms of consulting with stakeholders and sharing research results.<sup>41</sup> Under the equity outreach section of Chapter 8, Empower Innovation Events is explicitly listed as one of the reasons why the CEC needs to increase its administrative budget<sup>42</sup> which suggests that CEC recognizes these events as administrative in nature.

Moreover, CEC did not adequately explain how facilitating these events is not administrative in nature similar to hosting workshops or the EPIC Symposium. Also, managing the innovation-related websites generally falls under monitoring and overseeing work and these types of functions are considered as administrative in nature. As described in the application, this program does not appear to include project analysis or evaluation or program tracking, which are considered as non-administrative functions.

---

<sup>41</sup> EPIC 4 Plan at 226.

<sup>42</sup> EPIC 4 Plan at 231.

In addition, the Empower Innovation Events webpage defines its function as “a public calendar with workshops, conferences, competitions, and other networking opportunities in California and beyond.”<sup>43</sup> This suggests that the website will manage and oversee events that facilitate the exchange of ideas and information between participants and as we have stated, managing and overseeing activities is considered administrative in nature.

#### **5.4.1.5. Summary**

Activities under Energize Innovation, EPIC Symposium, and Empower Innovation Events as described in the EPIC 4 Plan are deemed administrative in nature and so costs for these must be taken from the administrative portion of the EPIC 4 budget. Funds that were originally earmarked for these activities should be allocated to other research topics. CEC should file a Tier 2 advice letter supplement that describes how it plans to reallocate said funds, including identifying the strategic goals, strategic initiatives, R&D topic areas the funds will be allocated to and providing justification.

For Empower Innovation, CEC should explain in the same Tier 2 advice letter described above, its role regarding this online platform and provide more information how this research topic will advance market facilitation and benefit ratepayers. CEC should also detail the clean energy innovations resulting from the funding and explain how it will track the outcomes of this activity, including which partners are funded for what opportunities. CEC should also explain if and how its costs are pro-rated with respect to its appropriate share.

Alternatively, CEC may elect to use administrative funds for Empower Innovation and reallocate the non-administrative funding for this program to

---

<sup>43</sup> Empower Innovation Events webpage, accessed March 14, 2022, at <https://www.empowerinnovation.net/en/custom/events/directory>

other research topics and provide the same reallocation of funding details described in the preceding paragraph.

#### **5.4.2. R&D Topic 6**

Regarding Topic 6 which is entitled Energy Storage Use Case Demonstration to Support Grid Reliability, Cal Advocates states that this area unnecessarily duplicates numerous projects and programs that have been authorized by the Commission. Cal Advocates provided specific examples of energy storage deferral use cases that have been authorized by the Commission that are being conducted by IOUs and are being funded by ratepayers. In addition, Cal Advocates states that the Commission established the Distribution Investment and Deferral Framework (DIDF) to include deferral of distributed energy resources (DERs) and energy storage deferral into its procurement and grid planning practices. This means that additional investments in this area will not lead to further ratepayer benefits.

CEC responds to Cal Advocates that any complementary overlap does not unnecessarily duplicate past programs that are or have been conducted by IOUs and authorized by the Commission. If there is any overlap specifically in energy storage research, learning from previous applications is helpful and that a blanket assertion that such projects fail to offer any learning is unsupported. CEC adds that the EPIC 4 Plan supports the need for exploring and better defining new use cases and that ratepayers are benefitted by enhanced grid reliability, reductions in power outages, and improvements in power quality. Topic 6 also includes examples of use case applications other than deferral of new transmission and distribution lines by providing non-wire alternatives and is focused on defining the full range of energy storage applications.

Based on our review of Topic 6 as well as the arguments raised by both Cal Advocates and CEC, we find that Topic 6 does not appear to be duplicative because CEC will be able to conduct the due diligence required to avoid duplication as it forms its solicitations.

R&D Topic 6 contains research on energy storage use demonstrations to support grid reliability. Research in this area aims to document ways that storage can be used and integrated in planning and operations.<sup>44</sup> As stated by Cal Advocates and CEC, the Commission has authorized IOUs to procure energy storage and conduct research on energy storage deferral use cases. However, this topic will conduct research on defining use cases, understand what cases have been applied in the past, and explore new use cases.

As described in Topic 6, projects will assess different use cases to determine which use cases provide the best values for different energy storage capabilities that will help improve grid reliability and resilience. A list of specific use case applications is included in Topic 6<sup>45</sup> and the topics are broad and varied enough that duplication can be avoided. Research is also not limited to the topics that are listed. Thus, research under this area is not necessarily limited to research that has already been conducted by IOUs.

The projected results are targeted towards producing benefits to ratepayers, particularly towards enhancing grid reliability including the implementation of storage projects to enhance reliability of weather-dependent energy sources such as wind and solar and during public safety power shutoff events.

---

<sup>44</sup> Application Appendix A at 49.

<sup>45</sup> Application Appendix A at 51 to 52.



However, in order to ensure that the initiatives under this topic have the maximum impact and usefulness, the CEC should clearly explain the importance of each use case in its implementation. Coordination of EPIC projects with Commission proceedings should also be improved and this will be discussed later in this decision.

#### **5.4.3. Identification of Program Areas**

In its opening brief, Cal Advocates states that the EPIC 4 Plan fails to accurately identify the authorized program areas for its proposed strategic initiatives or R&D topics in accordance with D.12-05-037. This prevents the Commission, as well as stakeholders, from determining whether proposed investments fit within authorized EPIC activities. In addition, the EPIC 4 Plan ambiguously refers to all of its investment topics as R&D topics even though many of these topics are not specifically or exclusively Applied R&D proposals which is one of the authorized program areas. Cal Advocates cites two research topics that the EPIC 4 program describes as falling under more than one program area and argues that a research topic cannot simultaneously fall under more than one program area because each program area focuses on different sets of activities.

CEC states that D.12-05-037 specifically provides that investments shall fund the three program areas mentioned in Ordering Paragraph (OP) 3 namely: (a) applied R&D; (b) technology demonstration and deployment (TD&D); and (c) market facilitation.<sup>46</sup> However, the decision does not require a mapping of activities to specific programs.

---

<sup>46</sup> D.12-05-037 OP 3 at 99 to 100.

We find that CEC is correct and that OP 3 of D.12-05-037 clearly specifies that EPIC shall fund activities in the three program areas described above and provides definitions and the types of activities that are included in each program area. However, while it is true that a mapping requirement was not specified, in order to determine whether the EPIC 4 program will fund research topics under applied R&D, TD&D, or market facilitation, it is necessary to identify which program area is being funded by a specific research topic.

These concerns, however, are addressed by CEC's reply brief wherein it provides a chart showing which of the three EPIC program areas each of the 45 research topics are related to.<sup>47</sup> In order to promote greater transparency and better oversight by the Commission with respect to the actual activities that will be conducted, we find that the relationship between R&D Topic areas and the three foundational EPIC program areas should be included in the CEC's program reports.

With respect to several R&D topics falling under more than one of the three program areas, we find that this is not inconsistent with the requirements for EPIC set forth in D.12-05-037 and other decisions. We find it possible for certain research topics to be related to more than one program area. The R&D topics are broad enough and may encompass specific activities that are related to one program area and other activities that are related to another program area. While each program area is distinct, an R&D topic may include different types of research activities. What we find more important is that the R&D research topics fund investments within program areas authorized by the Commission as opposed to defined areas that are unauthorized.

---

<sup>47</sup> CEC Reply Brief Appendix A at 10-11.

#### **5.4.4. Identification of Amount of Funds**

Cal Advocates proposes that the EPIC 4 Plan be modified in order to properly identify the amount of funds to be devoted to particular authorized program areas. This allows the Commission to ensure that the required funds are being allocated to TD&D to benefit disadvantaged and low-income communities.<sup>48</sup>

We find that while D.12-05-037 set the initial funding for each program area in the EPIC 1 application, the decision does not define the requirements for the distribution of funding among the three program areas in future EPIC cycles. Moreover, D.21-11-028 directed EPIC administrators to show funding amounts at the strategic initiative level.<sup>49</sup> This suggests that a modification was made directing EPIC administrators to provide more granular information with regards to how funds are distributed since the three program areas are much broader than the strategic initiatives which identify the core approaches to meeting goals that are set at the strategic objective level. Unless modified by the Commission, CEC should continue to show funding amounts at the strategic initiative level pursuant to D.21-11-028. However, also providing the funding breakdown according to the three program areas is not inconsistent with D.21-11-028.

---

<sup>48</sup> Pub. Res. Code § 25711.6(b) requires CEC to expend at least 25 percent of the moneys appropriated from the EPIC fund for TD&D at sites located in, and benefiting, disadvantaged communities and Pub. Res. Code § 25711.6(c) requires CEC to expend at least 10 percent of the moneys appropriated from the EPIC fund for TD&D at sites located in, and benefiting, low-income communities located in the state.

<sup>49</sup> D.21-11-028 OP 8 at 57.

Additionally, Cal Advocates' concern is addressed by the CEC providing the distribution of funds according to the three program areas in its Reply Brief.<sup>50</sup> In addition, CEC states that the EPIC annual reports filed annually with the Commission detail the percentage of TD&D funding that is invested in projects located in disadvantaged and low-income communities.<sup>51</sup> Likewise, CEC should continue to provide this information in its future annual reports.

### **5.5. Required Modifications**

Based on our review, we find that the CEC's EPIC 4 Plan should be modified as discussed in this section.

#### **5.5.1. Clarity Regarding Possible Duplication**

Pub. Util. Code § 740.1(d) requires that projects should not unnecessarily duplicate research currently, previously, or imminently undertaken by other electrical or gas corporations or research organizations. In addition, Public Resources Code § 25711.5(a)(1) requires that funds should be awarded to projects that will lead to ratepayer benefits and result in a portfolio that is strategically focused and sufficiently narrow to make advancement on the most significant technological challenges.

As described in the plan, Topic 9 on Advancing Clean, Dispatchable Generation appears to have overlaps with Topic 8 on Infrastructure, Market Analysis, and Technology Demonstrations to Support Zero-Carbon Firm Dispatchable Resources. Both topics focus on hydrogen and biogas for dispatchable clean generation. To comply with § 740.1, CEC should submit a Tier 2 advice letter supplement to clearly explain why Topic 8 is separate and distinct from Topic 9. Alternatively, CEC can combine both topics and revise its

---

<sup>50</sup> CEC Reply Brief Appendix B at 12.

<sup>51</sup> CEC Reply Brief at 7.

allocated funding in consideration of any overlaps. An example would be to narrow the focus to make advancement on the most significant technological challenges under the Clean Dispatchable Resources initiative, including emphasis on increased deployment and lowering the levelized cost of the technologies.

Topic 22 entitled Integrating Distributed Energy Resources (DER) for Grid Supportive Vehicle Charging appears to have duplication with Topic 14 entitled Direct Current Systems for Efficient Power Delivery. The description of the two topics has many overlaps as direct current electrical infrastructure is the key to efficiently integrating DER and electric vehicle charging. Additionally, the description contained in Topic 22 is high-level and does not state what will actually be funded. Once again, in order to comply with § 740.1, CEC should submit a Tier 2 advice letter supplement to clearly explain why Topic 22 is distinct from Topic 14 or consider combining the two topics and revising its budget.

Lastly, some of research ideas in Topic 45 entitled Advancing the Environmental Sustainability of Energy Deployments, may be duplicative of research conducted at the federal level. For example, the US Department of Energy Database of Environmental Effects of Wind and Marine Renewable Energy (Tethys) looks at the environmental effects of wind energy and marine energy. CEC should file an advice letter supplement revising the EPIC 4 Plan to specify that Topic 45 is complementary and not duplicative to federal tools such as those provided through Tethys.

### **5.5.2. Increased Coordination**

In D.15-04-020, the Commission expressed its intent that EPIC projects and CPUC proceedings should be coordinated and directed EPIC administrators to

identify specific Commission proceedings addressing issues related to each EPIC project in their annual EPIC reports.<sup>52</sup> The Commission further expressed this intent by directing that EPIC investments are optimally aligned with and informed by key Commission and California energy innovation needs and goals in setting forth the framework for the EPIC Policy and Innovation Coordination Group (PICG).<sup>53</sup> Finally, the Commission reinforced this intent by directing that the PICG's role "is to support the development of the administrators' capacity to understand Commission policies and proceedings, and how their projects best align with those policies and proceedings; and to support the Commission's capacity to understand and leverage energy innovations in key policy areas."<sup>54</sup>

Pursuant to the above, the application does identify several linkages between research topics 14, 15, 21, and 44 with CPUC proceedings. However, our review shows that there are many more linkages between CPUC proceedings and research topic areas in the EPIC 4 Plan beyond the four identified in the application. Examples of some of these proceedings are R.18-12-006 (transportation electrification), R.19-01-011 (building decarbonization), R.19-09-009 (microgrids), R.20-05-003 (integrated resource planning), and R.20-08-022 (clean energy financing). Additionally, our review finds potential opportunities for coordination with the Commission's Emerging Technologies Program related to energy efficiency innovation and Energy Division's Transportation Electrification section related to vehicle-to-grid and vehicle-to-load integration.

---

<sup>52</sup> D.15-04-020 OP 6 at 62.

<sup>53</sup> D.18-01-008 at 24.

<sup>54</sup> D.18-10-052 at 90.

Thus, we find that coordination with the Commission should be made periodically, as guided by Energy Division staff, during the duration of the EPIC 4 investment cycle to ensure that there is an updated exchange of information between the Commission's Energy Division staff and CEC staff regarding proceedings and related Commission programs that have linkages with the research topics included in the plan.

### **5.5.3. Additional Funding Details**

As discussed in Section 5.4.4, D.21-11-028 requires that funding for the EPIC 4 Plan be expressed at the Strategic Initiative level which the application generally complies with. The decision explains that this level of detail provides greater transparency into the level of funding and effort required for each initiative and provides information on how these initiatives will be operationalized.

However, in this particular instance, we find that more information regarding funding allocation is warranted concerning the Strategic Objectives that are supported by a single Strategic Initiative. For example, the plan can subdivide these strategic initiatives and provide the funding amount for each subdivision. Alternatively, the plan can provide the percentage or how much will be allocated to major research topics. To comply with D.21-11-028, CEC should clearly explain in its Tier 2 advice letter supplement how the EPIC 4 Plan is modified to provide a greater level of funding detail on the Strategic Objectives supported by a single Strategic Initiative.

We find that this additional level of detail will provide the Commission further understanding regarding the CEC's funding priorities, what is to be accomplished by each of the Strategic Objectives, and how each Strategic Initiative supports the realization of the Strategic Objectives.

## **5.6. Compliance with Requirements**

As stated earlier in Section 5.2, the EPIC 4 Plan contains six strategic objectives and nine initiatives. The strategic objectives show the state policy goals that need to be achieved while the strategic initiatives are the core approaches to meeting the goals. There are also 45 R&D Topics which are the high-level actions to be taken to execute the approaches. Each of the 45 topics generally include a description of the research topic and contain sections discussing the innovation need, market and technology trends, expected outcomes, metrics and performance indicators, primary users and beneficiaries, guiding principles, and the background and previous research that have been conducted on this topic. In some instances, some of the research projects under a specific R&D Topic are described and discussed. These research projects are the funded elements or programs where EPIC R&D is executed.

Based on our review, we find that the EPIC 4 Plan complies with the requirements set forth in D.12-05-037 and the relevant decisions that have modified said decision with the exception of the exclusions concerning Topic 42 described in Section 5.4 and the modifications identified in Section 5.5 of the decision.

We find that the EPIC 4 Plan complies with the primary and mandatory principle of the EPIC program which is that the plan offers reasonable probability of providing benefits to electricity ratepayers as stated in Pub. Util Code § 740.1. The benefits are clarified in D.21-11-028 as improving safety, increasing reliability, increasing affordability, improving environmental



sustainability, and improving equity, all as related to California's electric system.<sup>55</sup> .

The research topics also support either environmental improvement, safety, efficient usage of energy, reduction to system load, grid reliability, development of new and renewable resources, or improvement to existing technology such as better storage. Thus, the EPIC 4 Plan complies with Pub. Util. Code § 8360.

In addition, specific R&D research topics are designed to produce societal benefits, greenhouse gas emissions mitigation, support for low emission transportation, economic development, and other benefits. Many of the research topics are on subjects related to research topics that were authorized in prior EPIC plans.

The research topics all fall under one or more of the three primary EPIC program areas: applied R&D; TD&D; or market facilitation and the EPIC 4 Plan shows the policy justification that is being supported. Funding costs are identified at strategic initiative level pursuant to D.21-11-028 although CEC also provided the funding breakdown for each of the three program areas.

Projects that are speculative or have a low probability for success are minimized and the research topics are consistent with state goals. The plan also shows how potential investments will improve the electricity system and includes metrics and performance indicators that reasonably allow determination whether an investment plan is successful.

The EPIC 4 Plan is consistent with the CEC's administration of the EPIC program pursuant to the requirements under Public Resources Code 25710 *et seq.*

---

<sup>55</sup> D.21-11-028 at 39, at 42-44, OP 2 at 55, and at A1.

Funds will be allocated to projects that provide electricity ratepayer benefits, and projects will report advancements towards achieving California's energy goals. Localized health impacts were taken into account and competitive bids for project applications shall be applied as necessary. In addition, the CEC hosted 12 public events in 2021<sup>56</sup> to gather input from stakeholders and the public regarding development of the EPIC 4 Plan.

#### **5.6.1. Compliance with New Administrative Budget Framework**

OP 16 of D.21-11-028 required all EPIC administrators to propose an administrative budget framework consisting of a detailed line-item list of EPIC administrative costs. After a joint workshop, each of the EPIC administrators including CEC, filed advice letters containing proposals for the administrative budget framework to be used. The advice letters were approved with minor modifications in the Non-Standard Disposition (NSD) Letter issued by the Commission's Energy Division on March 14, 2022. Subsequently, an ALJ ruling was issued on March 22, 2022 requiring the CEC to update its EPIC 4 filing to comply with the NSD Letter.

CEC filed a supplement to its application on April 1, 2022, showing a revised annual administration budget as well as details concerning allocation of the proposed increase of \$7.4 million in its administrative budget to the firm CEC administrative cost cap of 15% as authorized in D.21-11-028.<sup>57</sup>

The supplement that CEC filed complies with Energy Division's NSD Letter and provides a revised allocation of CEC's annual administrative budget in tabular form that is in accordance with the administrative budget

---

<sup>56</sup> Workshops were held beginning May 10, 2021 through October 15, 2021.

<sup>57</sup> D.21-11-028 OP 5 at 56.

framework adopted by the Commission. Thus, the directive in D.21-11-028 has been completed and complied with in this application.

### **5.6.2. Compliance with ESJ Action Plan**

In February 2019, the Commission adopted the Environmental and Social Justice (ESJ) Action Plan to serve as a roadmap for implementing the Commission's vision to advance equity in its programs and policies for ESJ or disadvantaged communities.<sup>58</sup> The ESJ Action Plan includes goals related to health and safety, consumer protection, program benefits, and enforcement in sectors regulated by the Commission.

We find that the EPIC 4 Plan promotes and supports several of the ESJ Action Plan's nine goals. As stated by CEC, it includes equity considerations that are integrated into its initiative development and initiative plans which supports the first ESJ goal. The CEC includes communities in the development and implementation of its projects and disadvantaged communities are benefitted by several of its projects. Goal two of the ESJ Action Plan is also supported because the EPIC 4 Plan includes increased investment in clean energy resources and these will benefit communities, improve air quality, and promote public health. Goal three is also supported because a large portion of TD&D funds will be invested in projects with demonstration sites located in low-income or disadvantaged communities which will improve access to higher quality services. Goal four is also supported because many projects will increase climate resiliency in ESJ communities. The EPIC 4 Plan also does not contravene any of

---

<sup>58</sup> The ESJ Action Plan was approved February 21, 2019 in CPUC Public Agenda 3433 at Item # 44 [17051]. Version 2.0 of the ESJ Action Plan was approved April 7, 2022 in CPUC Public Agenda 3505 at Item # 45 [20479]. The Commission adopted Version 2 of the ESJ Action Plan on April 7, 2022.

the other ESJ goals that it does not directly support and so we conclude that this application is consistent with the Commission's ESJ Action Plan.

## **6. Conclusion**

D.20-08-042 authorized the continuation of the EPIC program from 2021 to 2030. That decision also authorized the annual budget for EPIC for 2021 to 2025 and the interim EPIC 4 Plan for 2021. Finally, the decision directed CEC to file this application for approval of years two to five of the EPIC 4 Plan for 2022 to 2025.

Based on our review, we find that the EPIC 4 Plan should be modified as follows:

- a. CEC should file a Tier 2 advice letter supplement to describe how it plans to reallocate costs for Energize Innovation, EPIC Symposium, and Empower Innovation Events under Topic 42. These activities should be supported by the administrative portion of the EPIC 4 budget and the non-administrative funds earmarked for the above topics should instead be reallocated to research topics.
- b. CEC should file a Tier 2 advice letter supplement to explain how Empower Innovation under Topic 42 will advance market facilitation and benefit ratepayers. Alternatively, CEC can fund this topic with administrative funds and reallocate the non-administrative funds earmarked for this project to other research topics.
- c. CEC should file a Tier 2 advice letter supplement to explain how Topic 9 is distinct from Topic 8. Alternatively, the two topics can be combined and CEC would inform the Commission of any changes to the funding for the combined topics.
- d. CEC should file a Tier 2 advice letter supplement to explain how Topic 22 is distinct from Topic 14. Alternatively, the two topics can be combined and CEC

- would inform the Commission of any changes to the funding for the combined topics.
- e. CEC should file a Tier 2 advice letter supplement revising the EPIC 4 Plan to specify that Topic 45 is complementary and not duplicative to federal tools.
  - f. CEC should coordinate with the Commission periodically, as guided by Energy Division staff, regarding proceedings and related Commission programs that have linkages with the research topics included in the EPIC 4 Plan.
  - g. CEC should file a Tier 2 advice letter supplement that provides more information particularly regarding funding allocation of Strategic Objectives that are supported by a single Strategic Initiative.

Except for the above modifications, we find that the EPIC 4 Plan complies with the EPIC filing requirements established in D.12-05-037 and relevant decisions that modified it, Pub. Util. Code § 740.1 and § 8360, and CEC's administration of the EPIC program pursuant to the requirements under Public Resources Code § 25710 *et seq.*

The CEC's updated administrative budget supplement to the plan complies with the Commission's Energy Division NSD Letter approving the new framework and complies with the Commission's direction requiring an updated administrative budget framework. The plan also aligns with the Commission's ESJ Action Plan.

The EPIC 4 Plan should be approved subject to the filing of advice letter supplement(s) to comply with the modifications identified above and discussed in the body of this decision.

## **7. Comments on Proposed Decision**

The proposed decision of ALJ Rafael Lirag in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments

were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed by CEC on May 18, 2022. No Reply Comments were filed by any party.

We have reviewed the comments and appropriate changes to the decision have been made.

We find it reasonable to allow CEC to demonstrate with data described below why individual Topic 42 activities will advance market facilitation and benefit ratepayers.

Aside from the arguments raised in its March 10, 2022 Reply Brief, CEC should include the following data as well as other data to support its arguments:

- Reduction of "customer adaptation" non-technical market barriers to uptake of EPIC innovations in disadvantaged, low-income, and ESJ communities;
- Partnerships formed to support and develop EPIC projects that effectively engage and address the priorities of disadvantaged, low-income, and ESJ communities;
- Increased awareness of EPIC innovations among clean energy entrepreneurs;
- Increased awareness of EPIC innovations among policymakers and private decision-makers; and
- Increased program tracking through increased accessibility to information on EPIC innovations.

We note however, that determination of whether EPIC activities are to be funded through program or administrative funds is not at the discretion of EPIC administrators. D.12-05-037, D.13-11-025, and D.15-04-020 clearly demonstrate the Commission's intent that EPIC duties and activities defined as administrative, incur administrative costs and shall be funded through administrative budgets subject to the administrative cost cap.

## **8. Assignment of Proceeding**

Darcie L. Houck is the assigned Commissioner and Rafael Lirag is the assigned Administrative Law Judge in this proceeding.

### **Findings of Fact**

1. D.20-08-042 authorized the continuation of EPIC until 2030, directed the CEC to file this EPIC 4 application for 2021 to 2025, and authorized an annual budget of \$147.26 million for the EPIC 4 program.
2. The EPIC 4 Plan in this application sets forth how CEC will administer its portion of the approved funding for EPIC 4 which is \$147.26 million annually.
3. D.21-07-006 approved the CEC's interim EPIC Investment Plan for 2021.
4. The Commission evaluates proposed programs and how funding shall be distributed taking into consideration the guidelines set forth in Pub. Util. Code § 740.1.
5. D.12-05-037 provides specific guidelines on what the EPIC applications should include and remains in effect.
6. The guidelines in D.12-05-037 have since been modified by subsequent decisions such as D.21-11-028.
7. In D.12-05-037, the Commission deemed that costs to prepare investment plans and costs to monitor and oversee the progress of projects are administrative costs.
8. In D.15-04-020, the Commission states that program planning, workshops, and reporting are administrative activities.
9. Costs to evaluate programs and direct, necessary, and technical coordination that contributes directly to projects are not administrative in nature.
10. Narrowing the scope of activities will not change their characterization if such activities fall within a much broader scope of administrative activities.

11. The fact that a contractor will be performing the activities as opposed to in-house EPIC administrative staff, does not change the nature of said activities.

12. The Energize Innovation website appears to be a reporting platform wherein the status and results of EPIC projects are posted and reported individually.

13. The Energize Innovation website does not identify itself as being affiliated with EPIC and there does not appear to be any program evaluation involved.

14. While the objectives for Empower Innovation may fall under activities that support market facilitation, CEC should demonstrate clearly that this activity goes beyond merely overseeing and maintaining this online platform.

15. The Empower Innovation online platform only includes a small percentage of EPIC-related funding opportunities and there is little indication that the platform is related to or tied to EPIC.

16. In D.15-04-020, the Commission directed EPIC administrators to coordinate, with input from Energy Division, to host an annual EPIC Innovation Symposium, and specified that this symposium shall be part of their normal administrative duties.

17. The EPIC Symposium under Topic 42 is the very same symposium discussed in D.15-04-020.

18. Empower Innovation Events include planning, managing, and conducting topical forums and managing innovation-related websites.

19. In the Program Administration section of the EPIC 4 Plan, Empower Innovation Events are identified as an important administrative component of its EPIC outreach and stakeholder engagement strategy.



20. Under the equity outreach section of Chapter 8, Empower Innovation Events is explicitly listed as one of the reasons why the CEC needs to increase its administrative budget.

21. CEC did not adequately explain how facilitating Empower Innovation Events is not administrative in nature; and managing the innovation-related websites generally falls under monitoring and overseeing work which are considered administrative in nature.

22. As described in the application, the Empower Innovation Events program does not appear to include project analysis or evaluation or program tracking, which are considered as non-administrative functions.

23. The Empower Innovation Events webpage shows that the website will manage and oversee events that facilitate the exchange of ideas and information between participants. These activities are considered administrative in nature.

24. R&D Topic 6 will conduct research on defining use cases, understand what cases have been applied in the past, and explore new use cases.

25. A list of specific use case applications is included in Topic 6 and the topics are broad and varied enough that duplication can be avoided.

26. Research under R&D Topic 6 is not necessarily limited to research that has already been conducted by IOUs.

27. In its Reply Brief, CEC provided a chart showing which of the three EPIC program areas each of the 45 research topics are related to.

28. It is possible for certain research topics to be related to more than one of the three EPIC program areas.

29. The R&D topics are broad enough and may encompass specific activities that are related to one program area and other activities that are related to another program area.

30. D.12-05-037 set the initial funding for each program area in the EPIC 1 application but does not define the requirements for the distribution of funding among the three program areas in future EPIC cycles.

31. D.21-11-028 directed EPIC administrators to show funding amounts at the strategic initiative level.

32. Also providing the funding breakdown according to the three program areas is not inconsistent with D.21-11-028.

33. Cal Advocates' concern regarding allocation of funds by program area is addressed by the CEC providing the distribution of funds according to the three program areas in its Reply Brief.

34. CEC states that the EPIC annual reports filed annually with the Commission detail the percentage of TD&D funding that is invested in projects located in disadvantaged and low-income communities.

35. As described in the plan, Topic 9 appears to have overlaps with Topic 8 because topics focus on hydrogen and biogas for dispatchable clean generation.

36. As described in the plan, Topic 14 appears to have overlaps with Topic 22 because the two topics have many overlaps and because direct current electrical infrastructure is the key to efficiently integrating DER and electric vehicle charging.

37. Some of research ideas in Topic 45 may be duplicative of research conducted at the federal level.

38. The application identifies several linkages between research topics 14, 15, 21, and 44 with CPUC proceedings pursuant to D.15-04-020.

39. There are many more linkages between CPUC proceedings and research topic areas in the EPIC 4 Plan beyond the four identified in the application.

40. The application complies with D.21-11-028 and expresses funding of the EPIC 4 Plan at the Strategic Initiative level.

41. In this particular instance, more information regarding funding allocation is warranted concerning the Strategic Objectives that are supported by a single Strategic Initiative.

42. The plan offers reasonable probability of providing benefits to electricity ratepayers and the research topics support either environmental improvement, safety, efficient usage of energy, reduction to system load, grid reliability, development of new and renewable resources, or improvement to existing technology such as better storage.

43. The R&D research topics are designed to produce societal benefits, greenhouse gas emissions mitigation, support for low emission transportation, economic development, and other benefits.

44. Many of the research topics are on subjects related to research topics that were authorized in prior EPIC plans.

45. The research topics all fall under one or more of the three primary EPIC program areas: applied R&D; TD&D; or market facilitation and shows the policy justification that is being supported.

46. Projects that are speculative or have a low probability for success are minimized and the research topics are consistent with state goals.

47. The plan shows how potential investments will improve the electricity system and includes metrics and performance indicators that reasonably allow determination whether an investment plan is successful.

48. Funds will be allocated to projects that provide electricity ratepayer benefits, and projects will report advancements towards achieving California's energy goals.

49. Localized health impacts were taken into account and competitive bids for project applications shall be applied as necessary.

50. CEC filed a supplement showing a revised annual administration budget as well as details concerning allocation of the proposed increase in its administrative budget.

51. CEC states that it includes equity considerations that are integrated into its initiative development and initiative plans, which supports the first ESJ goal.

52. The CEC includes communities in the development and implementation of its projects and disadvantaged communities are benefitted by several of its projects.

53. Goal two of the ESJ Action Plan is supported by the EPIC 4 Plan because it includes increased investment in clean energy resources which will benefit communities, improve air quality, and promote public health.

54. Goal three of the ESJ Action Plan is supported because a large portion of TD&D funds will be invested in projects with demonstration sites located in low-income or disadvantaged communities, which will improve access to higher quality services.

55. Goal four of the ESJ Action Plan is supported because many projects will increase climate resiliency in ESJ communities.

56. The EPIC 4 Plan does not contravene any of the other ESJ goals that it does not directly support.

### **Conclusions of Law**

1. Because the interim plan for administration of funds for 2021 was already authorized in D.21-07-006, the total budget covered in this application is \$592 million which represents \$147.26 million annually from year two to year five of EPIC 4 or from 2022 to 2025.

2. Maintaining the Energy Innovation website and ensuring that information is current and up-to-date is administrative in nature.

3. The Energy Innovation website should utilize administrative funds and CEC should inform the Commission whether such costs should be pro-rated considering that other entities can also post their own projects and data to this online platform which CEC appears to be maintaining.

4. CEC must demonstrate its role regarding the Empower Innovation platform more clearly and explain how the platform will advance market facilitation and benefit ratepayers. Otherwise, administrative funds should be utilized for this activity.

5. The EPIC Symposium under Topic 42 is a normal administrative activity and costs for planning and holding this annual symposium should be accounted for in CEC's administrative budget for EPIC 4.

6. The Empower Innovation Events activities are considered administrative in nature.

7. R&D Topic 6 does not appear to be duplicative because CEC will be able to conduct the due diligence required to avoid duplication as it forms its solicitations.

8. In order to ensure that the initiatives under Topic 6 have the maximum impact and usefulness, the CEC should clearly explain the importance of each use case in its implementation.

9. In order to promote greater transparency and better oversight by the Commission with respect to the actual activities that will be conducted, the relationship between R&D Topic areas and the three foundational EPIC program areas should be included in the CEC's program reports.

10. R&D topics falling under more than one of the three EPIC program areas is not inconsistent with the requirements for EPIC set forth in D.12-05-037 and other decisions.

11. D.21-11-028 directing EPIC administrators to provide more granular information with regards to how funds are distributed at the strategic initiative level suggests that a modification was made to D.12-05-037 because the three program areas are broader than the strategic initiatives.

12. CEC should continue to show funding amounts at the strategic initiative level pursuant to D.21-11-028.

13. To comply with § 740.1, CEC should submit a Tier 2 advice letter supplement to clearly explain why Topic 8 is separate and distinct from Topic 9 or combine both topics and revise its funding allocation.

14. To comply with § 740.1, CEC should submit a Tier 2 advice letter supplement to clearly explain why Topic 14 is separate and distinct from Topic 22 or combine both topics and revise its funding allocation.

15. CEC should file an advice letter supplement to specify that Topic 45 is complementary and not duplicative to federal tools.

16. CEC should coordinate with the Commission periodically, as guided by Energy Division staff, during the duration of the EPIC 4 investment cycle to ensure that there is an updated exchange of information regarding proceedings and related Commission programs that have linkages with the research topics included in the plan.

17. CEC should modify the plan to provide a greater level of funding details on Strategic Objectives supported by a single Strategic Initiative in order to provide the Commission further understanding regarding the CEC's funding priorities.

18. The EPIC 4 Plan complies with the requirements set forth in D.12-05-037 and the relevant decisions that have modified said decision with the exception of the exclusions concerning Topic 42 described in Section 5.4 and the modifications identified in Section 5.5 of this decision.

19. The EPIC 4 Plan complies with Pub. Util Code § 740.1 and § 8360.

20. The EPIC 4 Plan is consistent with the CEC's administration of the EPIC program pursuant to the requirements under Public Resources Code 25710 *et seq.*

21. The supplement that CEC filed complies with Energy Division's NSD Letter and is in accordance with the administrative budget framework adopted by the Commission.

22. The EPIC 4 Plan promotes and supports several of the ESJ's nine goals and is consistent with the Commission's ESJ Action Plan.

## **O R D E R**

### **IT IS ORDERED** that:

1. The Electric Program Investment Charge 2021 to 2025 (EPIC 4) Investment Plan filed by the California Energy Commission (CEC) in this application is approved subject to the following modifications:

- a) CEC shall utilize funds from the administrative portion of the EPIC 4 budget to fund activities for Research and Development (R&D) Topic 42. Funds that were originally earmarked for R&D Topic 42 shall instead be reallocated to other research topics. However, if CEC can demonstrate with data as described in this decision how Empower Innovation and other individual Topic 42 activities will advance market facilitation and benefit ratepayers, then Empower Innovation and other applicable Topic 42 activities can be funded using non-administrative funds;
- b) CEC shall add descriptions to R&D Topic 8 and 9 that explain how the two are not duplicative of one another.

Alternatively, the two topics can be combined, and any budget reallocation shall be explained and justified;

- c) CEC shall add descriptions to R&D Topic 14 and 22 that explains how the two are not duplicative of one another. Alternatively, the two topics can be combined, and any budget reallocation shall be explained and justified;
- d) R&D Topic 45 must be revised in order to explain why it is not duplicative of existing federal tools; and
- e) CEC shall provide more information and more granular details regarding funding allocation of Strategic Objectives that are supported by a single Strategic Initiative.

2. Within 30 days from the date of this decision, California Energy Commission shall file a Tier 2 advice letter supplement to its Electric Program Investment Charge 2021 to 2025 Investment Plan incorporating the modifications and explanations stated in Ordering Paragraph 1. In addition, the Tier 2 advice letter supplement shall also include the following:

- a) Explanation regarding any reallocation of funds pursuant to Ordering Paragraph (OP) 1;
- b) If applicable, demonstrate with data as described in this decision how Empower Innovation and other individual Topic 42 activities will advance market facilitation and benefit ratepayers pursuant to OP 1;
- c) The need and justification for any reallocated funding pursuant to OP 1; and
- d) The importance of each use case regarding implementation of Research and Development Topic 6.

3. Within thirty days from the date of this decision, California Energy Commission shall communicate with the Commission's Energy Division to discuss and schedule periodic coordination that will consider proceedings and related Commission programs that have linkages with the research topics



included in the Electric Program Investment Charge 2021 to 2025 Investment Plan.

4. California Energy Commission shall include a description of the relationship between Research and Development topic areas and the three foundational Electric Program Investment Charge (EPIC) program areas in its EPIC program reports.

5. Future EPIC applications that will be filed by the California Energy Commission shall continue to show funding amounts at the Strategic Initiative level unless otherwise directed by a subsequent Commission decision.

6. Application 21-11-021 is closed.

This order is effective today.

Dated June 2, 2022, at San Francisco, California.

ALICE REYNOLDS

President

CLIFFORD RECHTSCHAFFEN

GENEVIEVE SHIROMA

DARCIE L. HOUCK

JOHN R.D. REYNOLDS

Commissioners