

California Air Resources Board
CLEAN POWER PLAN COMPLIANCE
DISCUSSION PAPER
September 2015

California Air Resources Board (ARB) staff is providing this paper at the beginning of the process for developing California's Clean Power Plan submittal. It is intended for all stakeholders to provide an overview of many local, State, and federal considerations bearing on California's compliance plan and to highlight questions that stakeholders may wish to address. At this early stage, no decisions have been made. Instead, this paper is intended to inform an ongoing stakeholder process.

Introduction

California is committed to reducing greenhouse gas emissions from its electric power sector. A wide array of State policies, developed over decades and administered by agencies across state government, support that effort. These include California's Renewables Portfolio Standard, its Emissions Performance Standards, its energy efficiency standards for buildings and appliances, and a suite of measures authorized by the Global Warming Solutions Act, AB 32, including the Cap-and-Trade Regulation. Collectively, these and other State efforts have already helped California develop and maintain one of the lowest-carbon electricity sectors in the country.

The Clean Power Plan (CPP), a set of final emission guidelines for greenhouse gas emissions from existing fossil-fuel-fired power plants issued by the United States Environmental Protection Agency (U.S. EPA) will help extend and build upon this progress.¹ The CPP draws on U.S. EPA's authority under section 111(d) of the federal Clean Air Act, 42 U.S.C. § 7411(d), to set greenhouse gas emission limits for existing fossil-fuel-fired power plants. These limits begin to go into effect in 2022, coming fully into effect in 2030. The states must develop compliance plans for their affected power plants, and submit those plans to U.S. EPA for approval. ARB is charged with developing California's CPP compliance plan.

ARB strongly supports U.S. EPA's efforts to limit emissions from the electric power sector. Nationally, fossil fuel-fired power plants are, by far, the largest stationary source of the greenhouse gases that are causing climate change. Climate change poses an extremely serious threat to public health and prosperity in California, and throughout the world.² Limiting greenhouse gas emissions from existing coal and natural gas-fired power plants is a critical step to reduce the threat. Replacing these polluting sources of power with cleaner energy—including from renewable sources and from energy efficiency—supports job growth, economic development, and a reliable electricity grid.

¹ The full text of the final U.S. EPA rule is available, along with factsheets and supporting materials, at <http://www2.epa.gov/cleanpowerplan>.

² See generally, Kadir et al., *Indicators of Climate Change in California* (2013), available at: <http://oehha.ca.gov/multimedia/epic/pdf/ClimateChangeIndicatorsReport2013.pdf>.

Because the Cap-and-Trade Regulation and the carbon market it creates is designed to ensure California's progress toward the State's greenhouse gas targets, covers the electricity sector, and reflects the benefits of the many complementary energy sector policies noted above, ARB staff anticipates that the Cap-and-Trade Regulation will play a central role in the CPP compliance plan.

The CPP recognizes trading as a compliance pathway, including economy-wide programs. U.S. EPA suggests that economy-wide trading programs may be used for federal compliance via what it calls the "state measures" approach.³ Such a compliance plan would likely be designed to demonstrate that entities complying with ARB's Cap-and-Trade Regulation will also be in compliance with the federal CPP as a result of the operation of the carbon market and complementary energy sector policies. It would likely include federally enforceable emissions standards for covered power plants and a federally enforceable "backstop" to ensure federally-regulated power sector emissions meet the federal targets, if necessary.

A "state measures" compliance approach rooted in the existing Cap-and-Trade Regulation appears to have significant advantages. Such an approach supports and builds upon California's successful carbon market and complementary energy sector policies, minimizes additional regulatory requirements for stakeholders, and can smoothly integrate State and federal climate programs for the sector.

This discussion paper seeks feedback from all parties on a State measures approach, as well as on many program design choices that must be made. As ARB moves forward, it will work together with other government agencies, including California's air districts, the California Energy Commission (CEC), and the California Public Utilities Commission (CPUC), and jurisdictions linked to ARB's carbon market. ARB will also consult with entities charged with ensuring the reliability of the electricity grid. All stakeholders are invited to participate in the process. Members of disadvantaged communities are especially encouraged to participate.

Regulatory Overview

Federal, State, and local programs all have a place in California's CPP compliance planning. This section provides a brief overview of key programs and indicates how they may be integrated to support California's compliance plan.

The Clean Power Plan

Section 111 of the federal Clean Air Act, 42 U.S.C. § 7411, requires U.S. EPA to limit emissions from various economic sectors that cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare. U.S. EPA has successfully used section 111 programs, including standards for the electric power sector, for many years to cut air pollution while the economy has continued to grow.

³ See U.S. EPA, Clean Power Plan, Preamble (2015), pp. 1189-1193.

Section 111 establishes distinct processes for new and existing sources. New sources are regulated by U.S. EPA directly under section 111(b) under “standards of performance” for these sources that reflect the application of the best system of emission reduction determined to be adequately demonstrated. Existing sources are ultimately regulated by the states, based on emission guidelines issued by U.S. EPA under section 111(d). States develop compliance plans to achieve these guidelines, including standards of performance for affected existing units.

U.S. EPA issued section 111(b) standards for greenhouse gases (carbon dioxide (CO₂), in particular) for electrical generating units (EGUs)—which are the power generating units within power plants—in August 2015. Those standards, not directly at issue in this discussion paper, apply to new, modified, and reconstructed fossil-fuel-fired EGUs.

At the same time, U.S. EPA issued section 111(d) emission guidelines, CPP, for existing EGUs that commenced construction on or before January 8, 2014. States must submit a compliance plan (or request an extension) addressing these sources by September 2016 and must implement that plan (or be governed by a federal plan) beginning in 2022.⁴

To determine the degree of emission reduction appropriate for these EGUs, U.S. EPA built on the successful systems many states (including California) have used to reduce electric sector emissions. Those systems are characterized by the Clean Power Plan as consisting of three building blocks – efficiency improvements at EGUs, increased use of lower-emitting natural gas-fired units to offset coal-fired units, and increased use of renewable energy to offset fossil-fired units. U.S. EPA used these building blocks to conservatively calculate attainable emissions rates for affected EGUs.

U.S. EPA calculated interim emission rates (applicable in the 2022-2029 period) and final emission rates (applicable from 2030 forward). Those final rates, which are applicable nationally, are 1,305 pounds of CO₂ per megawatt hour (MWh) for steam generating units and integrated gasification combined cycle facilities, and 771 lb CO₂/MWh for combustion turbines. U.S. EPA then calculated equivalent mass emissions goals for the states, based upon a given state’s population of affected EGUs⁵ and the relevant emission rates. States may demonstrate compliance with either rate or mass goals, either in the aggregate or at individual EGUs.

For California, U.S. EPA calculated a final statewide mass goal in the 2030-31 period of 96.8 million short tons of CO₂ (e.g., 48.4 million short tons, approximately, in 2030). In the interim period from 2022–2029, U.S. EPA calculated that affected California EGUs

⁴ With a few exceptions: Alaska and Hawaii and U.S. territories do not yet have CPP targets; Vermont has no covered facilities. U.S. EPA is also working to develop compliance plans with Tribal Nations with covered facilities.

⁵ “Affected EGUs” are those covered by the federal rules. Although some exceptions apply, an affected EGU, generally, is any fossil-fired steam generating unit, integrated gasification combined cycle (IGCC) or stationary combustion turbine that commenced construction on or before January 8, 2014; is capable of selling more than 25 MWs to a utility power distribution system, and has a base load rating of greater than 250 MMBtu/hr heat input. See 40 C.F.R. § 60.5850.

may emit 408 million short tons of CO₂. These calculations were based on information available to U.S. EPA about affected EGUs in California. As ARB reviews data relating to California EGUs, ARB will work with U.S. EPA to adjust the covered EGU list as needed to reflect the status of California facilities, and the mass targets may change accordingly.⁶

California is required to submit a compliance plan to U.S. EPA that will ensure affected EGUs meet these limits. U.S. EPA offers states flexibility to design their plans, while indicating that mass-based emissions trading will often offer a particularly effective compliance approach. U.S. EPA also recognizes that certain trading programs—including California's—extend beyond the affected EGUs addressed in the federal CPP. Accordingly, U.S. EPA has provided for a “state measures” plan type that allows for integration of broader state programs with the federal requirements.⁷

Under that plan type, state programs do not themselves become federally enforceable, with the caveat that certain emission standards within those programs that apply specifically to affected EGUs are federally enforceable. These standards and measures are further supported by a federally enforceable backstop that makes up covered sector emissions if they substantially depart from the state's glidepath to the 2030 target.

Thus, a state measures plan largely allows for continued operation of successful state programs, while providing a critical layer of federal oversight to ensure that those programs deliver on both state and federal targets. ARB staff has identified a state measures plan as the most likely plan type to suit California's needs, given our existing programs, including the economy-wide Cap-and-Trade Regulation.

State plans are to be submitted to U.S. EPA by September 6, 2016. However, states are also allowed to submit a more general “initial submission” and request an extension of up to two years. U.S. EPA has also proposed (but not yet finalized) other plan submission flexibilities, including “parallel processing” options under which state and federal approval processes would move forward jointly over the next few years. It has also proposed “model” state plans that may guide state compliance efforts, and federal compliance plans that will apply in states that choose not to submit their own plans.

State Policies and Programs

California's long-standing commitment to addressing climate change has put it in a very strong position to plan for, and comply with, the CPP.

The success of energy sector programs and policies carried out by the CPUC and the CEC support this progress. These include California's Renewables Portfolio Standard, its energy efficiency standards, and its Emission Performance Standard. In addition, reliability planning and balancing authorities, including the California Independent System Operator, along with power producers, generators, and utilities, have helped to

⁶ See U.S. EPA, Clean Power Plan, Preamble, p. 840 (discussing this recalculation possibility).

⁷ See *supra* fn. 3.

begin decarbonizing the electricity sector while providing a robust and reliable grid and some of the lowest power bills in the nation.

These programs are a critically important complement to the direct emissions reduction measures undertaken by ARB, and required by CPP. ARB's own programs include the Cap-and-Trade Regulation, which plays a central role in supporting the State's emissions reductions efforts.

In the First Update to the AB 32 Scoping Plan, ARB determined that it will need to "keep building on the framework" that California has established, including setting mid-term targets for greenhouse gas emissions.⁸ As California maintains and extends its programs, putting further downward pressure on electricity sector emissions under the overall economy-wide cap, CPP compliance can be achieved as well. Indeed, consistent with AB 32, and with Governor Brown's Executive Order B-30-15, among other authorities, California is aiming for 40 percent emissions reductions below 1990 levels by 2030, and an 80 percent cut below 1990 levels by 2050. Other measures affecting EGU emissions are also underway: California will work to double energy efficiency in existing buildings and to raise its share of renewable power to 50 percent by 2030. As California meets these goals, it will also ensure compliance with the federal targets.

The Cap-and-Trade Regulation is a critical component of California's climate program. The Cap-and-Trade Regulation covers large emitting sectors, which comprise 85 percent of the California economy, including the electric power sector. Consistent with AB 32, the Regulation's carbon market program addresses all power that serves California, including both imported power and native generation. Entities participating in the market must secure compliance instruments (allowances and offsets) sufficient to cover their emissions under a declining overall cap. Entities may trade these instruments, subject to certain limits.

The power sector comprises a large portion of California's emissions. According to ARB's most recent Greenhouse Gas Inventory, emissions associated with the sector were 20 percent of total California emissions in 2013 (11 percent coming from in-state generation, 9 percent from imports).⁹ Accordingly, the power sector is also an important part of the carbon market. Owners and operators of the vast majority of California fossil-fuel EGUs must participate in the market, as must all electricity importers. These entities are also covered by the Mandatory Reporting Regulation, to ensure that the market operates with high-quality verified information.

ARB is now beginning stakeholder processes that will shape these programs in the post-2020 period. In addition to updating the agency's overall Scoping Plan for

⁸ See ARB, First Scoping Plan Update (2014) at ES5, *available at* http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.

⁹ See <http://www.arb.ca.gov/cc/inventory/data/data.htm>.

greenhouse gases, ARB will explore amendments to the Cap-and-Trade and Mandatory Reporting Regulations over the next two years.¹⁰

These amendments and planning processes also present the appropriate regulatory mechanism to enact measures necessary for CPP compliance and for integration with California's existing programs. Providing a clear path forward for both State and federal compliance will benefit all stakeholders.

Air District Permitting and Enforcement

California's air districts have authority to regulate criteria and toxic pollutants from stationary sources, and many districts are focused on the climate challenge as well. ARB will work closely with the districts as it develops the CPP compliance plan. One important area of collaboration will concern operating permit programs (also referred to as "Title V" programs after the relevant title of the federal Clean Air Act). Title V permits must reflect all applicable federal requirements for covered sources. As ARB develops federally enforceable compliance conditions for affected EGUs, it will work with the districts, and other stakeholders, to balance workload and resource needs, and to determine appropriate permitting approaches for the compliance plan.

Regional Partnerships

The CPP allows states to develop regional partnerships via trading linkages and via agreements on particular elements within state plans. California statutory authorities also provide for cooperation, including potential linkages between the California carbon market and those in other jurisdictions. California's market is linked with the carbon market of the Canadian Province of Québec.¹¹ As CPP compliance planning continues, California may have the opportunity to link programs with other jurisdictions, or to collaborate in other ways. ARB anticipates an ongoing conversation around options for collaboration, focusing especially on how these options may affect overall greenhouse gas emission trajectories, compliance costs, and many efforts already underway to enhance the functioning of the electricity grid in the West, including renewable energy integration.

Summary

Local, State, and federal programs can be coordinated to meet California's greenhouse gas emissions goals and the CPP compliance targets. Although many programs and policies drive electricity sector emissions reductions in California, ARB staff currently view the Cap-and-Trade Regulation as the central "state measure" for CPP compliance purposes. This is because the capped carbon market ultimately guarantees the State's emissions reduction targets, imposes compliance obligations on each covered electricity

¹⁰ ARB will also continue to pursue transportation strategies that will greatly reduce fossil fuel use in that sector as well, including transport electrification.

¹¹ Information on linkage efforts to date is available at <http://www.arb.ca.gov/cc/capandtrade/linkage/linkage.htm>.

generator, and reflects the operations of complementary measures throughout the energy sector. The carbon market also affords opportunities for regional collaboration. Accordingly, ARB staff believes the continued operation of the carbon market, in concert with its complementary measures, and supported by required federal backstops, provides a good route to ensuring CPP compliance.

Discussion Topics

ARB staff welcomes stakeholder feedback on CPP compliance approaches. This section highlights areas where feedback would be especially useful.

Plan Design Options

The most fundamental question facing ARB is the basic architecture of the compliance plan. For the reasons discussed above, ARB staff is inclined toward a “state measures” plan based on the Cap-and-Trade Regulation, and supported by the State’s energy efficiency and renewable energy programs. The discussion questions in this paper are focused around this plan design.

Broadly speaking, a state measures plan would be rooted in a demonstration that the continued operation of the carbon market will also deliver compliance with the federal CPP mass-based emissions goals. The federally enforceable plan would likely require all affected EGUs to be in compliance with the Cap-and-Trade Regulation (and the underlying Mandatory Reporting Regulation) during the federal compliance period. Affected EGUs would also need to be in compliance with any triggered “backstop” measure required to bring sector emissions back into compliance with the federal goals and the glidepath to them. This backstop would only be triggered if emissions from affected EGUs veered meaningfully from the compliance glidepath established in California’s plan.

ARB staff believes such a plan structure, which would essentially add a limited federally enforceable overlay for affected EGUs to the existing, successful, State carbon market is an effective way to comply with the CPP. No decision, however, has been made and other plan structures, or other State measures, may also be appropriate.

Questions stakeholders might wish to address include:

1. Do stakeholders agree that a mass-based, state measures plan, based primarily on the continued operation of the Cap-and-Trade Regulation, and recognizing the emissions-reducing consequences of the State’s complementary energy sector policies, is an appropriate compliance plan design for California?
2. What other compliance plan designs, if any, hold significant promise?

Applicability

ARB staff is working with stakeholders, including the owners and operators of affected EGUs, to ensure that all relevant EGUs are identified and incorporated into California's compliance plan. This work includes determining whether any exemptions offered by U.S. EPA can be properly applied to any California EGU.

Enforcement and Permitting

If ARB's CPP compliance plan is approved, certain aspects of the plan will become federally enforceable against covered entities. If ARB adopts a state measures plan, with a requirement for covered EGUs to participate in and comply with the Cap-and-Trade and Mandatory Reporting Regulations, these requirements will be federally enforceable in some form; so will the relevant backstop measure(s).

Staff is investigating the appropriate form any federally enforceable requirements might take. This investigation will occur in close coordination with California's air districts and with energy agency staff. Relevant considerations include, but are not limited to (1) ensuring that the compliance plan is readily enforceable by ARB, U.S. EPA, air districts, and citizens; (2) avoiding unnecessary workload and costs for permit-writers and regulated parties; and (3) ensuring that federal enforcement and permit requirements support the ongoing, smooth functioning of ARB programs. Maintaining the confidentiality of market-sensitive data will be a key consideration.

Questions stakeholders might wish to address include:

3. How might ARB and air districts ensure that any permit terms developed for federal enforceability reasons are appropriately designed, and protect the confidentiality of market-sensitive data?
4. What lessons may be learned from permit terms enforcing other trading programs?

Backstop and Glidepath Design

The CPP requires state measures plans to have a federally enforceable backstop to ensure that emissions from the affected EGUs meet the federal target. ARB staff believes that it is very unlikely that a backstop will be triggered in California, because the State's science-based climate goals, as advanced through its climate and energy policies, will significantly reduce emissions throughout the CPP compliance period, and California emissions are expected to be well below the federal targets.

Backstop design is sensitive to the shape of the glidepath to 2030, because the backstop will be triggered only if emissions depart more than 10 percent from the relevant emissions goals. U.S. EPA provides states some discretion in designing appropriate emissions reductions trajectories.

ARB staff will also carefully attend to the implications of the backstop for the functioning of the larger carbon market, as well as to the implications for affected EGUs, ratepayers, and members of the public. Staff will focus on designing a backstop and glidepath that operate efficiently and equitably in the context of the State's climate and air pollution goals.

One backstop option being considered would involve identifying a pool of California allowances under the cap that could be purchased and surrendered by affected EGUs to cover any departure (of 10 percent or more) from the glidepath. Another might involve using a modified version of the proposed federal plan as the core of the backstop measure.¹²

Questions stakeholders might wish to address include:

5. Assuming that the Cap-and-Trade Regulation is used to support a state measures plan, what backstop designs might integrate best with the design of the Cap-and-Trade Regulation? If a market response is appropriate, what compliance instruments, or pools of compliance instruments, might be appropriate for use within the backstop?

6. What other backstop design options are available, inside or outside of the market?

7. Are there particular glidepaths that might best integrate the backstop into the larger California carbon market and the economy-wide emissions reductions trajectory?

Analysis and Demonstrations

As part of a state measures plan submission, ARB would need to demonstrate that the relevant state measures and emissions standards in the plan will achieve compliance with the federal targets. ARB staff, working with partners at the CEC and CPUC, are investigating options for this demonstration. Data and analyses contained within ARB's Greenhouse Gas Inventory and within the Integrated Energy Policy Report (and the modeling supporting that report) appear to be especially useful in this regard. The PLEXOS model and other tools used by the CEC, in particular, may be an important part of this demonstration.

U.S. EPA has also added demonstration requirements to address "leakage" between existing and new EGUs. U.S. EPA points out that some plan designs covering only existing EGUs may produce perverse incentives for expanded operations or construction of new EGUs that are not covered by existing source plans. U.S. EPA therefore seeks appropriate demonstrations that this issue has been addressed where relevant. Because both new and existing EGUs are already covered by California's Cap-and-Trade Regulation, and so experience generally the same compliance costs,

¹² U.S. EPA's federal plan proposal is available at: <http://www3.epa.gov/airquality/cpp/cpp-proposed-federal-plan.pdf>.

ARB staff believes these leakage incentives are likely not present in California, but welcome feedback on this point, and any analysis that may be needed.

Questions stakeholders might wish to address include:

8. What data sources, analytic processes, and model types should ARB and its partners consider in developing the required demonstrations? How best might ARB and its partners integrate analysis processes and data used in the Greenhouse Gas Inventory, IEPR, and update to the Scoping Plan?

9. Are there particular scenarios that staff should investigate in the demonstrations? For instance, are there particular “stress” or “policy” cases—including those associated with various IEPR demand forecasts—that should be considered?

Integration Mechanics

ARB staff is interested in the best ways to integrate any federal compliance plan with the Mandatory Reporting and Cap-and-Trade Regulations in ways that ensure compliance without creating unnecessary new obligations.

Reporting requirements between the State and federal programs appear to generally be aligned. EGUs in either program are able to report using techniques first established in U.S. EPA’s “Part 75” Acid Rain Program and reflected in the Mandatory Reporting Regulation. ARB staff believes that most processes, measuring devices, and protocols are already in place. However, staff will be carefully reviewing the relevant reporting and recordkeeping requirements to harmonize them, and welcomes stakeholder feedback on the best way to do so.

Similarly, the Cap-and-Trade Regulation appears to be generally consistent with U.S. EPA’s expectations for trading programs under CPP. Staff is reviewing CPP provisions, however, for relevant differences. These may include the timing of compliance events and the resulting compliance reports. U.S. EPA’s regular reporting requirements for states, including a July 1 reporting deadline, raise some challenges because of the later compliance dates (for both verified data submissions and Cap-and-Trade Regulation compliance) within ARB’s existing program. Reporting and compliance timelines therefore will be further considered, among other integration questions.

Questions stakeholders might wish to address include:

10. Do stakeholders agree that ARB’s Mandatory Reporting Regulation requirements, and incorporated Part 75 requirements, will enable existing reporting to comply with most of CPP’s reporting and recordkeeping requirements? Are amendments to ARB’s reporting regulations appropriate to more fully integrate the programs?

11. What steps might be appropriate to ensure that Cap-and-Trade Regulation compliance processes, periods, and reports sufficiently support compliance with CPP?

In particular, what options does ARB have to align relevant compliance dates, given U.S. EPA's deadlines?

Environmental Justice Issues

Environmental justice is a core priority for ARB. Outreach to vulnerable communities is also a required consideration in CPP compliance. As ARB develops compliance efforts for these federal rules, it will give careful consideration to the implications of its federal compliance programs for these communities.

ARB's ongoing Adaptive Management efforts, which track the effects of the Cap-and-Trade Program, may play a substantive role in ensuring that the Clean Power Plan (if based in part on the carbon market) has positive implications for these communities. U.S. EPA has highlighted these programs as important environmental justice efforts in the preamble of the final Clean Power Plan.

Questions stakeholders might wish to address include:

12. What options should ARB consider for best involving members of affected communities in the CPP compliance planning process?

13. How can existing tools, including the Adaptive Management program, best be used to support California's CPP compliance plan? What other tools might be considered?

Electric Grid Reliability

U.S. EPA requires that ARB demonstrate that reliability issues have been considered in CPP compliance planning. ARB staff regularly coordinates with CEC, CPUC, and California's balancing authorities, including the California Independent System Operator (CAISO) and public power entities. As a result, as California has reduced greenhouse gas emissions from its electricity sector, and grid reliability has been maintained and strengthened. Staff anticipates that this consultative process will continue, and will serve CPP compliance as well. Indeed, staff has already engaged in many state and regional discussions on electricity grid interactions with CPP, and California officials have also participated on Federal Electricity Regulatory Commission (FERC) technical conferences on these interactions.¹³

Staff is considering ways to structure consultations around CPP, and what analyses might be relevant and useful to perform. Given the long timescale of CPP, and the flexibilities inherent in trading systems, it appears appropriate to focus on less granular analyses, coupled with continued consultation during the implementation period. Such initial analyses might include consideration of planning reserve margins under various compliance scenarios. Staff notes that California's own climate and electricity policies

¹³ See, e.g., the statement of ARB Assistant Executive Officer Michael Gibbs to FERC's Western Regional Technical Conference on these issues, available at <http://www.ferc.gov/CalendarFiles/20150220110141-Gibbs,%20CA%20Air%20Resources%20Board.pdf>.

are likely to be more important influences on California's electricity sector than the CPP itself. Accordingly, analyses of those policies, and their effects on reliability and on electricity consumers, will continue to be a priority.

14. How can ARB and its coordinating agencies best use existing processes to ensure reliability during CPP implementation? Are any additional analyses warranted?

Clean Energy Incentive Program

U.S. EPA intends to develop a "Clean Energy Incentive Program" under which the federal government would provide compliance incentives to states that invest in renewable energy and energy efficiency projects that operate in 2020 and 2021. These incentives take the form of matching allowances or emissions reduction credits provided from a federal pool. Incentives are greatest for investments in low-income communities.

ARB staff is considering how and whether California should participate in this program. Among the relevant issues are how such federal incentives could be accounted for within the structure of California's Cap-and-Trade Regulation, which currently does not include a mechanism to accept such federal compliance instruments.

Questions stakeholders might wish to address include:

15. Should California submit a nonbinding statement of interest in participating in the Clean Energy Incentive Program? What advantages and disadvantages do stakeholders see for such participation?

16. If so, what mechanisms might be necessary to integrate the program with California's Cap-and-Trade Regulation? How should compliance instruments associated with the federal program be treated? Are there other options for participating in the Clean Energy Incentive Program that would not require such integration?

Regional Interactions

The CPP, and U.S. EPA's proposal for federal compliance plans and model state plans, allow states to collaborate on compliance plans. These collaborations may take several forms, including linkage between trading regimes.

California State law also provides guidelines for regional cooperation of this sort. State law requires ARB to account for all power consumed by California, including imported power. State law also establishes rigorous requirements for California to link its carbon market to other jurisdictions. State law also requires ARB to design its programs to avoid leakage of emissions from California.

Within these constraints, ARB staff anticipates that California will have opportunities to explore collaborations over the course of the CPP compliance period. Not all of these

opportunities may be realized in the initial plan submission period, but plan revisions would allow the State to explore opportunities as they develop.

Staff is interested in stakeholder feedback on how California can best explore opportunities that will reduce emissions associated with power serving California, and how best to evaluate regional compliance opportunities. Staff is also aware that continuing changes in the western power grid, including potential expansions of CAISO markets, may bear on these analyses.

Questions stakeholders might wish to address include:

17. What analytic tools and venues are appropriate for assessing the emissions and compliance cost opportunities and concerns, including any emissions leakage or accounting concerns, associated with various regional compliance options?

18. What regional compliance options should ARB staff evaluate? Which of these options are more or less consistent with the state measures plan design ARB staff have identified as a strong compliance option?

Federal Plan and Model Plans

U.S. EPA has proposed model state plan designs and federal compliance plan designs. These designs focus on rate and mass trading as compliance options. ARB staff believes that California has considerable experience to offer U.S. EPA in this area, and is interested in ensuring that the final model state plans and federal plans serve emissions reduction goals successfully. ARB staff is also considering how these plans might interact with California's State programs, especially if they are adopted by jurisdictions in the West. ARB intends to comment on the federal proposals.

Questions stakeholders might wish to address include:

19. Are there features of the proposed model state and federal plans that California should highlight as particularly important to retain, or to modify, in the finalized version of these proposals?

20. What potential interactions between these proposed plans and California's compliance strategy should ARB staff consider in the planning process?

Processing Tools

U.S. EPA has proposed adding several state plan review tools to its general 111(d) regulations. These include making clear that U.S. EPA has the authority to partially approve or deny or conditionally approve state compliance plans. The proposed amendments also allow for "parallel processing" of compliance plans, a procedure under which U.S. EPA and state processes move forward in tandem to allow for more expeditious plan review decisions. ARB staff believes that these and related tools in the

proposal provide useful additional flexibilities, but welcome stakeholder feedback on these proposed tools and other tools that might be helpful.

Timing

Because California's CPP compliance plan is strongly related to the post-2020 period of State programs, including the Cap-and-Trade and Mandatory Reporting Regulations, ARB staff believes that stakeholders, including market participants, will benefit from coordinated compliance and regulatory processes that will provide a clear path forward on a reasonable timescale. ARB staff also believes that it is important to provide clear indications of how California intends to comply early in the process. Regulatory certainty is critical to regulated entities and energy entrepreneurs. Meeting U.S. EPA's submission deadline also provides an opportunity for California to continue to play a leadership role in climate policy development.

Accordingly, staff is exploring rulemaking schedules that will allow for consideration of the CPP compliance plan and amendments to relevant regulations on similar timescales, with the majority of these processes taking place between now and 2017, with a goal of beginning the plan approval process within U.S. EPA's September 2106 deadline.

Questions stakeholders might wish to address include:

21. What issues and processes do stakeholders believe to be most important for coordination?

Next Steps

ARB staff looks forward to continuing conversations with stakeholders. A workshop, including CEC and CPUC staff, to explore these issues in general terms is scheduled for October 2, 2015, and staff expect additional, more focused workshops, to be scheduled later in 2015 and early 2016.

Feedback on the questions in these documents may be emailed to Chris Gallenstein (cgallens@arb.ca.gov) or mailed to California Air Resources Board, C/O Chris Gallenstein, P.O. Box 2815, Sacramento, CA, 95814. Feedback by October 19, 2015 would be appreciated to aid in ARB's planning processes.