



## GWF POWER SYSTEMS

December 13, 2010

**VIA ELECTRONIC SUBMITTAL (<http://www.arb.ca.gov/lispub/comm/bclist.php>)**

Clerk of the Board  
Air Resources Board  
1001 I Street  
Sacramento, CA 95814

**Re: GWF Power Systems Comments on the Air Resources Board's Proposed California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation, released October 28, 2010**

Dear Clerk of the Board:

GWF Power Systems (GWF) offers the following comments on the California Air Resources Board's (ARB) Proposed California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation (Proposed Cap & Trade Regulations), which were released for public review on October 28, 2010.

### **Summary of Comments**

GWF understands the benefits of a cap-and-trade program and appreciates ARB's consideration of the impacts the Proposed Cap & Trade Regulations would have on GWF's enterprise.

GWF's 30-year Standard Offer power purchase agreements (PPAs) pre-date AB 32 and place GWF in the category of independent power producers (IPPs) without a reasonable basis for recovery of compliance costs associated with the Proposed Cap & Trade Regulations. As described in detail below, the Proposed Cap & Trade Regulations will have an immediate and potentially crippling impact on GWF's enterprise because the Cap & Trade compliance costs for its petroleum coke power plants due to the chemical make up (high carbon content) of the waste fuel source are significantly higher than a typical natural gas fueled power plant and these costs were not anticipated when the PPAs were executed in the mid 1980s. Therefore, the PPAs do not provide a mechanism under which GWF could recover compliance costs related to the use of a byproduct fuel source associated with the Proposed Cap & Trade Regulations.

GWF requests that the Proposed Cap & Trade Regulations be amended such that GWF receives allowances for its GHG emissions associated with its pre-AB 32 PPAs, declining throughout the 2012-2020 period at the same rate provided for the cement manufacturing industry. GWF's contractual obligations for its petroleum coke power plants were established pursuant to long-standing federal and state waste-to-energy policies that precede AB 32. This

allowance allocation will serve to prevent the negative economic impact to GWF from its inability to recover compliance costs.

As a California independent power producer born in part from the 1970s energy crisis, GWF strongly supports the State's efforts to combat climate change. As a company, GWF is contributing to the State's efforts by making investments to convert its natural gas-fired power plants to cleaner and more efficient combined cycle plants and making investments to build new solar power plants in California. GWF will continue to support the State's efforts to combat climate change and wants to remain a viable California business, both factors driving the regulatory considerations requested in this letter.

### **Introduction to GWF**

GWF is a privately held California company headquartered in Pittsburg, California. GWF directly and indirectly employs 145 people, including managers, engineers, and operating technicians. The company owns and operates 9 power plants (500 MWs total), some of which are fueled by petroleum coke and others by natural gas. GWF's petroleum coke fleet consists of five 20MW power plants located in Contra Costa County and one 25MW power plant located in Kings County. The Contra Costa County power plants operate under 30-year PPAs with Pacific Gas & Electric (PG&E), four of which end in 2020 and one of which ends in 2021. The Kings County facility PPA ends in 2011.

GWF's gas-fired fleet consists of two 100MW peaker power plants in Kings County (the Hanford and Henrietta peaker plants), and one 170MW peaker power plant in San Joaquin County (the Tracy peaker plant). The Tracy peaker received its California Energy Commission (CEC) permit earlier this year for conversion to combined cycle technology, executed a ten-year PPA with PG&E for that conversion, and closed the financing mechanism for the conversion in November 2010. This conversion reduces Tracy's hourly GHG emissions rate by 35%. This environmental benefit for the State did not go unnoticed and GWF was publically praised by the Commissioners at the hearing for pursuing this important project on a voluntary basis.<sup>1</sup> The Kings County Hanford and Henrietta peakers also received CEC permits earlier this year for conversion to the cleaner and more efficient combined cycle technology.

In addition to its conversion projects, GWF is reducing its GHG footprint by developing two solar power generating sites in the Central Valley. GWF has expended significant time, energy, and money so far in that development effort, including permitting, land rights, and ISO interconnects.

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<sup>1</sup> [http://www.energy.ca.gov/business\\_meetings/2010\\_transcripts/2010-03-24\\_Transcript.pdf](http://www.energy.ca.gov/business_meetings/2010_transcripts/2010-03-24_Transcript.pdf)

### **GWF's Petroleum Coke Power Plants**

GWF's petroleum coke power plants utilize locally produced petroleum coke, which is a residual by-product generated by California refineries as an integral part of the crude-oil refining process. The refinery coker is a key component in producing the maximum amount of transportation fuels (gasoline, jet fuel, and diesel) per barrel of crude oil.<sup>2</sup>

GWF's petroleum coke power plants were developed in response to the 1970s energy crisis and the passage and subsequent implementation of the Public Utility Regulatory Policies Act of 1978 (PURPA). PURPA was passed as part of the National Energy Act to promote greater use of renewable and alternative energy, including petroleum coke (a FERC defined waste fuel). PURPA created a market for certain non-utility electric power producers, known as Qualifying Facilities (QFs). As implemented in California, PURPA requires investor owned utilities (IOUs) to buy power from QFs at the utilities' "avoided cost" rate (the avoided cost being the price the utility would have otherwise paid/incurred to generate power produced by the QFs).

Petroleum coke power plants provide a variety of benefits to California. Burning a locally-produced waste as fuel allows California to diversify its energy supply and conserve natural gas. Petroleum coke also provides a check against the volatility of the natural gas market (GWF has provided PG&E with fixed priced energy in past years), reduces GHG emissions by eliminating overseas transportation-related emissions, avoids the release of criteria and toxic air pollutants, and keeps the combustion of this waste fuel in the stringent California regulatory arena. Note that GWF's power plants were built in the Bay Area Air Quality Management District (BAAQMD) with best available control technology (BACT) that incorporates the following features: circulating-fluidized-bed combustion technology in the production of steam and power (for low emissions), bag-house technology (for particulate control), ammonia injection (for NOx control), limestone injection (for SOx control).

### **GWF Cannot Recover Compliance Costs for Petroleum Coke Power Plants**

GWFs PPAs fall into the narrow range of pre-AB 32 long-term contracts that do not allow for recovery of the Proposed Cap & Trade Regulations' compliance costs. This is primarily due to the fact that the compliance costs for petroleum coke power plants are significantly higher than for most other types of QFs (primarily because petroleum coke contains 95% carbon and very little hydrogen) and these costs were not anticipated when the contracts were executed in the mid 1980s. Therefore, the contracts include no provisions under which a QF could recover disproportionate costs associated with policies to reduce GHGs.

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<sup>2</sup> In the 1960s, one of the products that refiners produced was residual fuel oil; which was used in California utility plants as an alternate/back-up fuel to natural gas (and as the primary fuel till the plants converted to natural gas). With the advent of air quality regulations (limiting pollutants such as NOx and SO2), cokers were added to the refining process. Cokers eliminate the residual fuel oil product stream, increases the transportation fuel yields of gasoline, diesel-fuel, and jet fuel, with the final residual product being petroleum coke. The addition of cokers facilitated the production of more clean transportation fuels out of the same barrel of crude. (See <http://www.npra.org/ourIndustry/refineryFacts/?fa=refineryWorks> illustrating of the refining process.)

Under the Proposed Cap & Trade Regulations, IOUs would receive allowances [Sections 95870(c)(1), 95892(b)(1)] that the IOUs would be required to auction. The auction proceeds must be used for the benefit of the IOUs' ratepayers [Section 95892(b)(1)] to offset the assumed increase in ratepayer electricity prices due to the costs of compliance with the Proposed Cap & Trade Regulations. The Proposed Cap & Trade Regulations are premised on the assumption that IPPs (like GWF) will recover their compliance costs by increasing the price of the electricity they sell to IOUs. See ARB Staff Report – Initial Statement of Reasons, p. II-32 (Oct. 28, 2010) (“Because the price of electricity in the wholesale electricity market will reflect the cost of these purchased allowances, staff expects that independent generators will incorporate their cap-and-trade compliance costs into their bids in the wholesale power markets. These costs will be paid by the IOUs when the power is purchased.”); Appendix J, Allowance Allocation, p. J-16 (“Because these generators will be able to fully pass any carbon costs through into the wholesale power market, no free allocation will be given to these entities.”).

ARB staff has acknowledged, however, that some long-term contracts may not permit IPPs to recover their compliance costs by increasing the price of electricity they sell to IOUs. ARB staff has further acknowledged that IPPs with long-term contracts that do not allow cost recovery may require special consideration in the Proposed Cap & Trade Regulations. ARB, Appendix J, Allowance Allocation, p. J-16 n. 15 (Oct. 28, 2010). GWF could not recover its compliance costs because the avoided cost rate (as defined above) would not reflect the high cost of compliance that GWF would incur relative to the electricity market as a whole. Over the course of the three compliance periods, GWF's compliance costs would quickly reach enterprise threatening levels.

### **GWF Should Receive Comparable Treatment to Similarly-Situated Industries**

GWF's electrical generating facilities are not the only petroleum coke fueled facilities in California. For example, some cement manufacturers burn petroleum coke for their energy needs. See ARB, Appendix F, Compliance Pathways Analysis, at p. F-26—27 (Oct. 28, 2010) (2006 data indicates that cement kilns employ petroleum coke for 19.7% and coal for 66.6% of their energy needs, respectively). The cement manufacturers with similar GHG emissions profiles and challenges related to GHG emission reduction would receive allowances under the Proposed Cap & Trade Regulations. See Sections 95890(a)-95891, and Tables 8-1, 9-1, and 9-2 (cement industry to receive direct allocations of allowances under a cap that declines to reach a 7.5% reduction by 2020). As a matter of policy equity, GWF should be treated similarly to similarly-situated industries.

### **Allowance Allocation to GWF**

To provide a balanced implementation of its Proposed Cap & Trade Regulations and avoid increasing global GHG and criteria air pollutant emissions, ARB should allocate allowances in a manner that recognizes the disproportionate and enterprise threatening burden that GWF faces relative to most other power producers. GWF's burden is the direct result of its efforts to comply with federal and state policies and the associated contractual obligations that GWF entered into.

ARB could accomplish this goal by amending the Proposed Cap & Trade Regulations such that GWF receives allowances for its GHG emissions associated with its pre-AB 32 PPAs, declining throughout the 2012-2020 period at the same rate provided for the cement manufacturing industry.<sup>3</sup> See Proposed Cap & Trade Regulations, Table 9-2. Proposed amendments to the Proposed Cap & Trade Regulations to achieve this goal are provided in Attachment A.

One of AB 32's core concepts concerns GHG "leakage", defined as "a reduction in emissions of greenhouse gases within the state that is offset by an increase in emissions of greenhouse gases outside the state." Health & Safety Code sec. 38505(j). Section 38562(b)(8) requires ARB to minimize leakage in the way it crafts any market-based compliance mechanism, such as the Proposed Cap & Trade Regulations. Additionally, Section 38570(b)(2) directs ARB to design any market-based compliance mechanism to prevent any increase in the emissions of criteria air pollutants or toxic air contaminants.

An alternative destination for California-produced petroleum coke (not otherwise consumed in California) is Asia (in fact, almost all California produced petcoke is exported). Petroleum coke that is exported to Asia instead of being consumed in California increases GHG emissions by the amount required to transport it to the end-user. In addition, criteria air pollutant emissions resulting from the consumption of additional tonnage of exported petroleum coke are almost certain to rise, since the emissions standards in Asia (particularly in China and India, two likely destinations of California petroleum coke) are not nearly as stringent as California's criteria pollutant standards.<sup>4</sup>

By granting allowances (on a declining basis) directly to GWF for GWF's historical GHG emissions, ARB would fulfill its mandate to give leakage, criteria pollutant, energy/GHG intensity, and economic issues due consideration when designing the Proposed Cap & Trade Regulations. ARB would treat GWF in a manner akin to other similarly situated entities that consume similar fuel. In addition, ARB would greatly reduce the economic impact of the Proposed Cap & Trade Regulations to allow GWF to comply with its Pre-AB 32 PPAs, thereby recognizing that GWF's PPAs are a product of both federal and state law to promote domestic energy independence through the consumption of by-product fuels, like petroleum coke.

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<sup>3</sup> GWF notes that ARB staff are still developing the methodology for distributing allowances to the IOUs. See Appendix J, Allowance Allocation, pp. J-59—60. GWF supports distribution on an historical emissions basis, which recognizes the difference in GHG emissions among the variety of electricity generating facilities that provide electricity to the IOUs.

<sup>4</sup> Recent reports have shown that particulate emissions from China have been found on the Pacific Coast due to transport on prevailing winds. "Researchers in California, Oregon and Washington noticed specks of sulfur compounds, carbon and other byproducts of coal combustion coating the silvery surfaces of their mountaintop detectors. These microscopic particles can work their way deep into the lungs, contributing to respiratory damage, heart disease and cancer." K. Bradsher and D. Barbozany, "Pollution From Chinese Coal Casts a Global Shadow," N.Y. Times, June 11, 2006.

**Conclusion**

GWF is fully supportive of California's initiatives to combat climate change and fully expects to bear some costs associated with those efforts; GWF simply asks for equitable treatment so that it can remain in business in California as it reduces its GHG footprint. GWF appreciates ARB's consideration of these comments. GWF looks forward to working with ARB staff in the near future to address any questions or concerns they may have with GWF's comments on the Proposed Cap & Trade Regulations.

Cordially,

A handwritten signature in black ink that reads "Mark Byron". The signature is written in a cursive, flowing style.

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## **ATTACHMENT A**

### **GWF's Proposal for Amending the California Air Resources Board's Proposed Cap & Trade Regulations**

[all proposed amendments to the proposed regulations are noted in underline or strikeout]

**Subchapter 10 Climate Change, Article 5, Sections 95800 to 96022, Title 17**

**California Code of Regulations, to be amended to read as follows:**

**Subarticle 2: Purpose and Definitions**

**§ 95802(a) (153).** “Pre-AB 32 Power Purchase Agreement” means a power purchase agreement between the owner and/or operator of an electrical generating facility and an electric distribution utility for the sale of electricity that does not provide the owner and/or operator of the electrical generating facility with a reasonable opportunity to incorporate the full cost of regulations governing emissions of greenhouse gases. A power purchase agreement qualifies as a “Pre-AB 32 Power Purchase Agreement” where:

- a. The power purchase agreement was executed on or before December 31, 2006, for a term greater than five (5) years.
  - b. The owner and/or operator of the electrical generating facility is a covered entity, but does not qualify as an electrical distribution utility.
  - c. The executed power purchase agreement does not allow the electrical generating facility to incorporate the full cost of regulations governing emissions of greenhouse gases into the price it charges the electrical distribution utility for electricity.
  - d. A power purchase agreement shall no longer qualify as a “Pre-AB 32 Power Purchase Agreement” if, after the effective date of this article, it expires or terminates.
  - e. The fact that a power purchase agreement includes a change in law or regulation provision, or a force majeure provision, shall not disqualify a power purchase agreement from being a “Pre-AB 32 Power Purchase Agreement” unless both parties to the power purchase agreement agree that such a provision entitles the owner and/or operator of the electrical generating facility to recover the cost of complying with regulations governing emissions of greenhouse gases.
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## **Subarticle 8: Disposition of Allowances**

### **§ 95870. Disposition of Allowances.**

(a) Allowance Price Containment Reserve. On December 15, 2011, the Executive Officer shall transfer allowances to the Allowance Price Containment Reserve, as follows:

- (1) One percent of the allowances from budget years 2012-2014,
- (2) Four percent of the allowances from budget years 2015-2017, and
- (3) Seven percent of the allowances from budget years 2018-2020.

(b) Advance Auction. On December 15, 2011, the Executive Officer shall transfer two percent of the allowances from budget years 2015-2020 to the Auction Holding Account.

- (1) These allowances shall be auctioned pursuant to section 95910.
- (2) The proceeds from the sale of these allowances will be deposited into the Air Pollution Control Fund and will be available upon appropriation by the Legislature for the purposes designated in California Health and Safety Code sections 38500 et seq.

(c) Allocation to Public Utilities.

(1) Electrical Distribution Utilities. The Executive Officer will place an annual individual allocation in the holding account of each eligible distribution utility on or before January 15 of each calendar year from 2012-2020 pursuant to section 95892. Allowances available for allocation to electrical distribution utilities shall be 89 million multiplied by the cap adjustment factor in Table 9.2 for each budget year 2012-2020.

(2) Reserved for Natural Gas Distribution Utilities.

(3) Owners and/or Operators of Electrical Generating Facilities not otherwise defined as Electrical Distribution Utilities. The Executive Officer will place an annual individual allocation in the compliance account of each eligible owner and/or operator of an electrical generating facility operating under a Pre-AB 32 Power Purchase Agreement on or before January 15 of each calendar year from 2012-2020 pursuant to section 95892. Allowances available for allocation to

owners and/or operators of electrical generating facilities operating under Pre-AB 32 Power Purchase Agreements shall be drawn from the pool defined in section 95870(c)(1), and multiplied by the cap adjustment factor in Table 9.2 for each budget year 2012-2020, except for Pre-AB 32 Power Purchase Agreements for petroleum coke fueled generation, which shall be multiplied by the cap adjustment factor for Cement Manufacturing in Table 9-2.

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## **Subarticle 9: Direct Allocations of California GHG Allowances**

### **§ 95890. General Provisions for Direct Allocations.**

(a) Eligibility Requirements for Industrial Facilities. A covered entity or opt-in covered entity from the industrial sectors listed in Table 8-1 shall be eligible for direct allocations of California GHG allowances if it has complied with the requirements of the MRR and has obtained a positive or qualified positive verification statement for the prior year pursuant to the MRR.

(b) Eligibility Requirements for Electrical Distribution Utilities. An electrical distribution utility shall be eligible for direct allocation of California if it has complied with the requirements of the MRR and has obtained a positive or qualified positive verification statement on its sales number for the prior year pursuant to the MRR.

(c) Reserved for Natural Gas Distribution Utilities.

(d) Eligibility Requirements for Owners and/or Operators of Electrical Generating Facilities not otherwise defined as Electrical Distribution Utilities. An owner and/or operator of an electrical generating facility shall be eligible for free, direct allocation of California GHG allowances if it has complied with the requirements of the MRR, has obtained a positive or qualified positive verification statement on its sales number for the prior year pursuant to the MRR, and is operating under a Pre-AB 32 Power Purchase Agreement.

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**§ 95892. Allocation to Electrical Distribution Utilities for Protection of Electricity Ratepayers.**

(a) Reserved for allocation to electrical distribution utilities.

(b) Transfer to Utility Accounts.

(1) Investor owned utilities. The Executive Officer will place allowances in the limited use holding account created for each electrical corporation.

(2) Publicly owned Electric Utilities. At least 90 days prior to receiving a direct allocation of allowances, publicly owned electric utilities will inform the Executive Officer of the share of their allowances that is to be placed:

(A) In the publicly owned electric utility's compliance account, or

(B) In the publicly owned electric utility's limited use holding account.

(3) Owners and/or Operators of Electrical Generating Facilities not otherwise defined as Electrical Distribution Utilities. The Executive Officer will place allowances in the compliance account of any covered entity from which an investor owned utility purchased electricity pursuant to a Pre-AB 32 Power Purchase Agreement, as defined by Section 95802(a)(153).

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