

United States Department of Energy
James V. Forrestal Building
Attn.: Honorable Secretary Mr. Dan Brouillette
1000 Independence Avenue
Southwest, Washington, D.C.

July 02, 2020

With attention for the perusal of Honorable President Mr. Donald J. Trump over Mr. Secretary

Submittal of three requests for the CPCE process to resolve the Climate Change crisis now

Dear Honorable Secretary of Energy Mr. Brouillette:

In pursuit to resolve the global Climate Change crisis with the commercial-ready technologies, yet to attain trillions of Dollars in revenue within the next 10 years to the interests of United States' economy, most importantly to fortify the United States' hegemony v.i., we implore you respectfully to devote your particular attention to our three requests that is addressed for Honorable Mr. President, eight other recipients below and to you in person.

More specifically, we furnish to you these three requests due to the vast economic benefit of the mean while commercial-ready CPCE process (Carbon Power & Chemicals Economy) for the entire nation of the United States, and urge you with candor to vet the technological feasibility as well as the extraordinary economic profit of the CPCE meticulously. A tentative break down for the economic potential of the CPCE associated with the upgrading of a 500 MW coal power plant with the approximately 1.2 BB\$ a year is enclosed for your close view in [4].

We address this to you because the CPCE stands in the very core responsibility and obligation of the Department of Energy in service to the nation as whole, yet due to DOE's capacity to re-examine and prove the merits of the CPCE for the nation.

As we, the people of the United States, are observing the unduly influence of formidable adversaries with their overt and covert operatives, who are exercising double-loyalty and/or multiple-loyalty to the oil and gas exporting countries, we the people require the Administration to place the interests of the nation at the first priority without dereliction and incapacitate those deplorable global warming deniers expeditiously and decisively now. Equally, we solemnly assert to you, the interests of the United States' people shall always surmount over the interests of individuals in the Administration, as well as over the interests of the foreign oil gas exporting countries, like Russia and others.

The present subject matter to the three requests to you appertains to the:

- I. Request for an independent peer review to the CPCE's technical and economic merits

- II. Request for comprehensive CPCE process simulation by DOE for proof of CPCE's high annual revenue of ca. 1.2 BB\$ per year
- III. Request to the issuance of a Conditioned Loan Guarantee for a coal power plant

We stress to you, we were already served twice with inappropriate sort of dismissive Alternative Fact phrases by DOE/NETL Mr. John Augustine (last one on February 05, 2020). That Mr. Augustine's message stated flamboyantly: "After carefully studying the proposed concept, DOE has concluded that there is no programmatic interest at this time", although DOE has issued seven "shackled" grants to the extent of MM\$255.- on the very same specific merits and features of the CPCE shortly thereafter without mere scruple for patent infringement [3].

Please submit your findings in response to these three requests on the grounds of salient facts, falsifiable scientific and engineering data (i.e. numbers, equations, algorithm) without buzzwords or deflective narrative now, thank you.

If you need to have formal confirmation for these three requests from the House Appropriation, Financial Services, House Committee for Energy and Commerce, Climate Crisis, Committee on Science, Space, and Technology, Joint Economic Committee or any other Committee of the House of Representatives, please share us this immediately upon receipt of this request by an e mail to the address below that we can be expeditiously supportive to DOE and undertake commensurable remedies for you, thank you.

We thank you in advance for taking responsive care in DOE's obligations to the entire nation. We equally thank you for passing on this letter and the three requests to the eight other recipients' securely, we gratefully appreciate your supports.

Respectfully Yours



F. Bairamijamal
President of EVISA Engineering LLC

Enclosed: The Three Requests
List of the nine recipients of the Three Requests by the direction of Honorable Mr. Secretary Brouillette.

List of the nine receiving individuals for the Three Requests in their Office

- 1) President of the United States Honorable Mr. Donald J. Trump
- 2) U.S. Secretary of Commerce Honorable Mr. Wilbur Ross
- 3) U.S. Director for Environment Protection Agency, Honorable Mr. Andrew R. Wheeler
- 4) DOE Assistant Secretary for Fossil Energy Mr. Steven Winberg
- 5) Deputy Assistant Secretary for Clean Coal and Carbon Management Mr. Lou Hrkman
- 6) Head of DOE Office for Electricity Delivery and Energy Reliability, Mr. Bruce J. Walker
- 7) Head of DOE Office for Energy Efficiency and Renewable Energy
- 8) Head of DOE Office for Fossil Energy, Mr. John Augustine
- 9) Head of DOE Office for Advanced Research Projects Agency-Energy Mr. L. Genatowski

The Request #1

Request for an independent peer review to the CPCE's technical and economic merits

With respect to this request for the independent technological peer review in the subpart A, we extend our invitation to the six DOE Offices, specifically due to their broaden competence and insights in the advanced fossil power generation and process engineering. Additionally, we invite these Offices with the experts in the United States Department of Commerce for an economic peer review in the subpart B that outlines specific breakdowns in terms of trillions of Dollars in revenue to the benefit of United States nation. The two subparts A and B shall comprise at least the following critical points and upon the discretion of the recipients in the U.S. Administration and Secretaries, it shall be added with other points with no restriction, whatsoever.

Due to immediate need to resolve the global warming as well as the technological potential for upgrading of nearly 4000 CO₂ emitting existing plants in the United States (vide the map of the USA in [1]), we respectfully request to set on the focal of the close review to the two post-combustion carbon capture and utilization. The final products shall be aimed at primarily to manufacturing of gasoline, aviation fuel, most importantly for military grade jet fuel for use in the U.S. Air Force and U.S. Navy for the first prototype plant.

Subpart A for independent technological peer review:

- A-1: The overall technical feasibility for the two post-combustion carbon capture, utilization and electrochemical conversion to syngas and oxygen, by then conversion of syngas to high end final products. The result shall include a plain coherent text in ca. one page for the perusal of other energy experts and the entire nation as whole too.
- A-2: The technological operability and the implementation of the CPCE's Advanced Combustion in the: (i) fossil fuel fired power plants with the particular stress on coal power plants, as well as in the (ii) gas turbine simple cycle and combined cycle power plants. The evaluation of the Advanced Combustion in the gas turbine Mother Plant shall also imply the auxiliary gas turbine under the operation of super-critical carbon dioxide cycle at high net efficiency (vide infra to point A-3).
- A-3: The technological operability of the Bairamijamal's First Thermodynamic Cycle for recovering the current waste heat by the operation of super-critical CO₂-cycle and conversion of the useless waste energy into useful power, be harnessed for driving compressor and generators, whereas the latter generators back up the DC power for the electrochemical conversion of liquid CO₂-water electrolyte to syngas and oxygen. The result of technical examination of the First Bairamijamal Cycle shall present the distinctive closing trajectory of the cycle in detail.

- A-4: Regaining liquid carbon dioxide out of CO₂-enriched flue gas from the CPCE's Advanced Combustion for the CO₂-CC section with the flue gas compressor attached to one of the turbine's turbo machinery.
- A-5: The comprehensive analysis and evaluation of CPCE's high pressure low temperature electrochemical syngas generator HPLTE-SG for the conversion of liquid CO₂-water electrolyte to syngas and oxygen on the ground of currently available low pressure information and technological predictions, when the electrolysis is translated to CPCE's high pressure operation. The peer review shall vet the operation of the CPCE's reactor at least in terms of: (i)DC current consumption and amperage, (ii)kind of commercial available electrodes, (iii)reactor hydraulics with the internal high circulation rate of the electrolyte in each compartment, (iv)purification of each of two product streams.
- A-6: Operation of two multi-stage turbine machinery sets with the attached two generators for the HPLTE-SG's syngas and oxygen for heat recovery power generation associated with: (i)Closing trajectory of the First Bairamijamal's Thermodynamic Cycle, (ii)recovery of intermediate process heat, both for multi-stage turbine operation with the breakdowns and detail presentation of process calculation for AC power generation. The initial operation of HPLTE-SG shall be set on with 4000 psi operation pressure and 75 Degree of Fahrenheit at stoichiometric ratio of liquid CO₂ and water.
- A-8: The critical peer review of CPCE in these two applications shall include the process heat recovery with the proviso for primary AC power generation, specifically in the:
- (i) Waste heat recovery upstream of cooling tower, i.e. primarily from the existing steam condenser(s)
 - (ii) Integration of an auxiliary combined gas turbine with CO₂ as working fluid and super-critical CO₂ turbine, whereas the auxiliary gas turbine itself operates under the CPCE's Advanced Combustion
 - (iii) High temperature process heat and additional syngas generation via gasification of CO₂-Sidestreams, vide CPCE's Advanced Combustion, 4th embodiment in [5]
 - (iv) Integration of thermal energy (superheated CO₂ and/or superheating of saturated HP/IP steam) from the CPCE's downstream section, wherein the syngas will be converted to high value products by the exothermic processes (e.g. for gasoline and jet fuel) and contributes to the overall AC power generation for backing up the HPLTE-SG DC current usage
 - (v) The extent of high value products manufactured from (i)HPLTE-SG's syngas and (ii) from the gasification section of the CPCE's CO₂-Sidestreams be expressed in metric tons or short tons per hour from a typical existing 500 MW coal power plant for further evaluation
 - (vi) The process evaluation shall reflect the extent of additional natural gas usage needed for the auxiliary gas turbine and gasification of CO₂-Sidestreams with

extent of the AC power generated totally and then converted to DC current for the supply lines to the HPLTE-SG units

A-9: Extent of tonnage and EBIT of the high end products on the grounds of the most important final products e.g. (i)transportation gasoline, (ii)aviation fuel, (iii)methanol, (iv)ethanol, (v)ammonia as the most important Mother Chemicals, which will be obtained from the nearly 4000 existing plants in the United States for both domestic use as well as export [6].

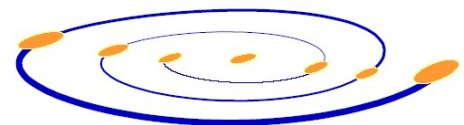
Although we anticipate the execution of present peer review as one of the very core purviews of the United States’ Department of Energy’s responsibility and obligations to the other Secretaries and Agencies, most importantly to the entire nation, we the nation, will compensate the DOE for these requests or portions of it, if DOE desires to receive a compensation for the issuance of the peer review or portion of this request. If so, please let us know as an entity or as a nation, thank you.

Subpart B for independent economic peer review:

The request for economic peer review is specifically pertaining to the upgrading of nearly 4000 commercial fossil energy plants to Zero-CO2 Emission and Zero-Pollution plants yet profiting trillions of Dollars within the next ten years alone in the United States. A map of USA with the fossil power plants is provided for you in [1]. Based on the expertise in the engineering, construction, operation and maintenance of mid-size and large scale commercial plants, the upgrading of a typical 500 MW coal power plant takes 18 months in engineering and construction with the following guidepost:

Number of projects in the United States	4000	
EPC Engineering Companies engaged for CPCE	30	
Number of projects	20	A year
Engineering & construction period	18	Months
Initial engineering for the first plant	1	Year
Number of years needed for engineering	6.7	Years
Last plants in construction within	9	Years
Last plants operational within	10	Years

B-1: Extent and number of directly benefitting companies (currently existing or those come to existence as result of CPCE) with services in Engineering various kinds with the estimated number of many hundreds of thousands new jobs associated with this sector within the window of the next ten years. Please express the findings both in estimates for revenue and number of millions new jobs and/or securing current jobs in salient numbers, thank you.



- B-2: Extent and number of directly benefitting companies (currently existing or those come to existence as result of CPCE) with manufacturing of equipment and construction in the sites in various kinds with the estimated number of millions of new jobs associated with this sector within the window of the next ten years, yet solely devoted for the upgrading of those 4000 plants only and yet this in the United States alone. The finding shall be expressed both in estimates for revenue and number of millions new jobs and/or securing current jobs.
- B-3: Extent and number of directly benefitting supplying companies for coal, natural gas, water purification and water treatment companies (i.e. the primary material suppliers to CPCE), as well as benefitting utility companies, i.e. the power generation and power distribution companies, as well as the domestic and international distribution companies involved with distribution of final products like gasoline, aviation fuel and chemicals, expressed both in estimates for revenue and number of millions new jobs and/or securing current jobs. Please submit your findings, expressed both, in estimates for revenue and the number of millions new jobs and/or securing current jobs.
- B-4: Number of indirectly benefitting sectors like all companies, who profit from low cost electricity and basic chemicals in manufacturing sectors, yet most importantly sectors in steel and aluminum production, pulp and paper sector, cement industry, automotive industry including benefitting electric vehicles. The estimate extent of these advantages shall be expressed in number of millions new jobs and/or securing current jobs by the token of numbers and expected revenue.
- B-5: The request for economic peer review shall imply a tentative estimate of international revenue and profit before taxes and interests earned by CPCE for the United States from the international business operation, solely for the two post-combustion applications alone for at least until the fiscal year of 2033.

The content of CPCE group of patents is provided in the tab [2]:

<https://www.evisa-engineering.com/patent.html>

A map of the world pertaining to the number and the names of 148 countries under the purview of the CPCE eligibility for revival and patent rights prosecution is provided in the link below. CPCE exclusive patent right is then warranted in every single one of these countries by the operation of the international PCT patent law treaty.

http://www.evisa-engineering.com/data/cpce_data/pdf/CPCE_PCT_Eligibility.pdf

Please kindly provide your findings and breakdowns of analysis results to each subpart A and B above first in a commonly understandable synopsis for the entire nation overboard, and then include all and every details of the DOE results in a saliently falsifiable, yet retractable manner for the perusal of national as well as international energy experts with no omission, nor reservation, nor unnecessary prolongation in time this time, thank you very much.

The Request #2

Comprehensive CPCE process simulation by DOE for proof of CPCE's high annual revenue

The competent and acquainted six DOE Offices above are well equipped with the mathematical, chemical and process engineering simulation tools like the ChemCad, Aspen, and NETL's AVESTAR, etc. Since the CPCE is grounded on already predictable, yet already available process basic data, a credible comprehensive process simulation can be also carried out by DOE to prove CPCE's feasibility in technical execution and also for the determination of the anticipated economic outcome readily and independently. For this reason, DOE capability shall be supportive to the other Secretaries and Agencies, as well as our experts, yet for the perusal of our utmost respectable nation. We implore DOE experts to verify the profit of a 500 MW coal power plant of ca. 1.2 BB\$ a year or to revert your amended revenue under the same input data.

The nitty-gritty of the CPCE for your entire physical-mathematical process simulation is highlighted in the 11 Key Process Steps, which are essentially the scope of technical feasibility outlined in the Request #1, subpart A. These key process steps are easily available to you and your team via:

http://www.evisa-engineering.com/data/cpce_data/pdf/Simplified_CPCE_Post-Combustion_Steps.pdf

For ease of verifications and possible discussions of your process simulation results in our team of energy experts, please kindly provide the output data of your process simulation in an excel spreadsheet data file with batch-sketches relevant to your mass and heat balances. These files shall be submitted for ChemCad and Aspen software as well thus to expel deviations caused by different versions of those software tools.

In case DOE/NETL prefers to carry out the process simulation with DOE's specific process simulation tools, DOE is requested to submit more comprehensive package in results of the CPCE for our team of energy experts, thank you.

Please kindly provide your findings of the physico-mathematical process simulation results accompanied with a commonly understandable concise synopsis for the entire nation overboard with no reservation, in addition to the details, thank you very much. Like the other requests, we anticipate your fellows are easily capable to provide these results within two or three weeks. Please outline your time window via an e mail to us upon receipt of these requests. Please kindly consider, the same findings will serve to reason the Conditioned Loan Guarantee and corroborate the DOE and States Loan Guarantees for the first upgraded fossil power plant according to the CPCE, thank you.

The Request #3

Request to the issuance of a Conditioned Loan Guarantee for a coal power plant

Upon the DOE's consent for the technical feasibility of CPCE to resolve the global warming, and the confirmation of auspicious trillions of Dollars in economic profit in the preceding peer reviews according to the Request #1, as well as the proven process simulation by the Request #2 that will greenlight the upgrading of an existing coal power plant, we then request to grant us a Conditioned Loan Guarantee that appertains to the financing for two purposes first:

- (i) Detail Engineering scope for upgrading of an existing coal power plant to Zero-CO₂ Emission and Zero Pollution, and
- (ii) a test rig for high pressure electrolysis of liquid CO₂ and water, wherein the low pressure state-of-the-art knowledge shall be translated to high pressure field of operation.

The completion of the two works above enables us to attain a more accurate engineering data at higher accuracy that shall substantiate the petition and approval to a final DOE Loan Guarantee for the construction of the first CPCE commercial plant. Therefore, we candidly propose the following criteria for the Conditioned Loan Guarantee. Please kindly provide your suggestions and criteria, if you wish to have other condition(s) be considered, thank you very much.

- Condition 1: Construction of a mid-size commercial plant according to the CPCE that performs an auspicious return of investment less than three years, preferably less than 2.5 year only (a typical mid-size fossil energy power plant performs an ROI of 7 to 8 years, a commodity chemicals in 5-6 years).
- Condition 2: The construction and operation of this plant MUST comply with the precept of Zero CO₂ Fossil Energy and Zero Pollution of CPCE, i.e. specifically either to mathematical zero or to a very little extent that can be neglected in the course of commercial mode of normal operation.
- Condition 3: The final output product(s) of the CPCE plants shall serve DIRECTLY to the national interest of the United States and interests of participating State(s), likewise the first prototype plant shall supply the military grade jet fuel for the United States Air Force or the United States Navy preferably.
- Condition 4: The engineering, construction, operation, and maintenance of this first plant shall perform a beacon for creation of millions of new jobs ascribed thereto first in the United States alone, by then through the market expansion globally.

Condition 5: The net outcome of the upgraded plants will significantly lower the costs in power generation, gasoline production and manufacturing of other basic and commodity chemicals. At least portion of that profit shall secure the commonwealth and extend the prosperity of the nation upon certain stipulations, which are to be determined and secured by operation of laws.

The points of reference:

- [1] Map of United States' fossil power plants subject to Zero CO₂ Emission and Zero Pollution is provided in the link below. Other CO₂ emitting plants, referred to as Stationary Source of CO₂ emission, can be acquired by United States Energy Information Administration or the U.N. Agencies
http://www.evisa-engineering.com/data/cpce_data/pdf/CPCE_Short_Description.pdf
- [2] The contents and details of the group of CPCE patents and PCT eligibility is provided in the tab for:
http://www.evisa-engineering.com/data/cpce_data/pdf/CPCE_PCT_Eligibility.pdf
- [3] DOE Grants issued under the purview of CPCE between December 19, 2019 to March 18, 2020 with some relevant NSF grants relevant to CPCE in three pages, enclosed to the Three Requests of July 02, 2020.
- [4] Tentative EBIT of Zero CO₂ Emission, Zero Pollution Fossil Energy for a 500 MWh Coal Power Plant with CPCE's Coal-To-Gasoline without other side products in one sheet, enclosed to the Three Requests of July 02, 2020.
- [5] CPCE's Advanced Combustion, also referred to as flue gas oxy-fueling, is presented shortly in
http://www.evisa-engineering.com/data/cpce_data/pdf/Abstract_FirstContiPatent.pdf
and more comprehensive in
http://www.evisa-engineering.com/data/cpce_data/pdf/Conti_Patent_Application_1.pdf
- [6] An over view over great number of high end products, which can be manufactured by CPCE out of waste heat and waste CO₂ is presented in:
http://evisa-engineering.com/images/gallery/CPCE_Product_Spectrum.pdf

Further elaborations can be received upon request with the proviso for unbiased independent peer review.