DYOCORE INC.
3125 Tiger Run Court #104
Carlsbad, CA 92010
Phone and Fax: 866-404-2428

Carla Peterman
CEC Commissioner

California Energy Commission
Office of Chief Counsel
1516 Ninth Street, MS-14
Sacramento, CA 95814

RE: DyoCore Response to Complaint of California Energy Commission
Request for Informal Hearing

Dear Ms. Peterman,

DyoCore generally denies the allegations stated in the complaint of the California Energy Commission dated July 26, 2011 submitted by Robert P. Oglesby. Pursuant to California Code of Regulations, Title 20. Section 1217, DyoCore respectfully requests consideration for an informal hearing to present its facts and declarations in support of its denial.

The allegations in the complaint are misleading under the totality of the circumstances surrounding DyoCore's application and require clarification. DyoCore respectfully submits its response, Exhibits and Declarations in support of the proposition that DyoCore met the requirements of the Emerging Renewables Program (ERP).

1. Summary of Response

It appears that DyoCore made some errors in obtaining its certification, however those errors were committed out of inexperience and naiveté in understanding the roles of the various parties involved in the certification process. It should be taken into consideration that DyoCore up until January 2011 was basically a business operated out of the garage of its founder Mr. Raine. Its SolAir product is the first and only experience DyoCore has had with wind generation of electricity and its only attempt at manufacturing any product and placing it into commerce and its first experience with working with the California Energy Commission.

In early 2009 DyoCore learned of the CEC's ERP program and applied for inclusion. The CEC instructed DyoCore to submit its application to the state's third party listing agent KEMA. Working with and in close communication with KEMA, DyoCore provided KEMA with data obtained from two independent testing sites, one in San Marcos California and a

second in Hampshire Illinois. DyoCore's product, SolAir, had been installed at these two locations for several months where electrical power output and wind condition data had been monitored and logged. Based on the data logs obtained from these two sites KEMA determined that the San Marcos California site did not meet the state listing criteria for minimum winds, however, KEMA concluded that the second site in Hampshire IL qualified.

DyoCore summarized annual performance data from the Hampshire IL site from approximately January 2009 through February 2010 and provided this information to KEMA. At KEMA's request the annual electrical generation performance data was summarized in monthly production schedules alongside coordinated wind data for the corresponding months and provided to KEMA for evaluation. From evaluation of this data KEMA provided DyoCore a power curve represented on a table and chart. KEMA also recommended a power curve listing to DyoCore. DyoCore responded to the suggested listing by asking for a listing at a different point in the curve to better represent the wind conditions where DyoCore believed the turbine would actually be installed. The listing at 1.6 kW at 18mph came off of the Power Curve calculations that KEMA reviewed from the wind and power data that DyoCore submitted. This was the first unintentional mistake made by DyoCore because as DyoCore has come to learn since it first submitted its data to KEMA, the data it submitted was not in the proper form from which to prepare a power curve.

Over the past year DyoCore has corresponded with several professionals within the industry that have aided DyoCore in reassessing of its raw data. Consequently DyoCore has created a wind to production power curve for direct real time indicated winds. DyoCore has maintained an updated record of this power curve work on its website. We have a general idea of what a power curve is but are still not certain as to how it was intended to apply to the listing, something we were ignorant of when we initiated the process with the CEC and KEMA. Furthermore DyoCore has taken steps to correct its mistake by including ongoing development information on its public website.

DyoCore's efforts to continue its education and better compliance with CEC regulations have been hampered from a current lack of understanding as to how the power curve is intended to apply as either Annual Average Wind Production or Real Time Wind Production, however DyoCore understands that its current data allows it to describe the performance of its SolAir product with sufficient accuracy as to not be materially misleading as to performance characteristics. In defense of DyoCore, as we were identifying our power curve, a third party whose product utilizes our motor was listed with the CEC (Exhibit 1 - TLG CEC Listing) at a similar rating to that of DyoCore but using higher wind speed. This shows that applying our real wind to power curve was accurate.

The new power curve data does show a lower power output at the same wind speeds, however, this change would not change the rebate applied to our product. It appears that although a mistake was made in our interpretation of the raw data and how it should be presented, that mistake did not amount to one that resulted in a material misrepresentation or result in a significant change to the qualification for rebate under the program.

The rebate program is currently in suspension and awaiting new guidelines. It has been indicated the new guidelines will require formal third party testing. DyoCore retained SWCC in June 2011 to assist DyoCore in meeting the expected new guidelines. As noted above, DyoCore is learning the processes necessary and diligently acting to ensure no further mistakes are made.

The California Energy Commission's complaint of July 26, 2011 alleges fraud against DyoCore. Fraud requires the intent to mislead others with false information. Being inexperienced and naïve in the application process should not rise to the level of intentional misrepresentation with the purpose of causing harm. DyoCore, upon realizing it had made a mistake in the information it presented to KEMA attempted to remedy and mitigate any harm it caused by publishing more accurate data on its public web site. The complaint of the CEC seeks to use this attempt at transparency, as further evidence of fraud and deceit. Admittedly, in hindsight DyoCore could have done some things better, but an attempt at correcting a mistake is not evidence of fraud, it is evidence of good faith and transparency and should not be used to condemn DyoCore. DyoCore mistakenly believed that KEMA was hired by CEC to confirm the accuracy and completeness of the data submitted by the applicants. DyoCore does not believe that a review of anything in the record would lead a reasonable person to believe that KEMA was hired only to ensure that the requested information was submitted but not to analyze or confirm that information. Working closely with KEMA as DyoCore did in establishing the initial power curve certainly did not remove this understanding from DyoCore. DyoCore, in its inexperience, relied upon KEMA and its representatives to review and assess the data DyoCore provided and make the appropriate listing.

Regardless of such listing by simply applying the correct real wind or annual wind would have resulted in the same rebate to be applied towards our product.

Our request for consideration and resolution:

DyoCore's SolAir has grown to be a significant Hybrid Wind/Solar energy tool within the emerging market. There are now hundreds of SolAir's installed throughout CA and over a thousand worldwide. New installations are estimated at a little over 4000 units within the next year. SolAir represents a significant change in who can afford and take advantage of small wind power generation. Removal of SolAir from the qualified list of products damages dozens of business who with high integrity and honorable actions submitted qualified ERP reservations representing thousands of CA residents. Based on the numbers presented in the complaint, SolAir appears to be the most successful and affordable small wind solution ever developed which advances the stated purpose of the program to the push for the continued development of new wind technologies that apply to everyone, not just the few in remote areas or those with significant financial resources.

DyoCore requests to be considered for re-rating under the new ERP guidelines as outlined in the July 2011 DRAFT and apply that rating to all currently outstanding held R1

reservations. DyoCore proposes it would be unwise and unfair make any changes retroactive for currently held/issued R2s as all parties involved acted honorably and in good faith based on valid data. Changing or withholding those R2 already approved would only damage dozens of business and hundreds of CA residents have applied and qualified under the existing terms and the intention of the program. In this respect any deficiency applicable to the SolAir 800 could and is corrected by a change from Annual Average Wind to Real Wind but the end result in applying this change is the same listing incentive placement simply at a higher wind speed similar to 99% of other turbines listed as approved equipment that are rated at 30mph or higher.

DyoCore in June of 2011 submitted application to the SWCC and expects testing to commence soon resulting in a formal rating certification that meets the new ERP standards and provides the CEC with a direct resolution to the complaint. This will also make DyoCore the first turbine manufacturer to qualify under the new CEC program guidelines to meet these objectives.

It is my strong belief that DyoCore meets the requirements of the CEC listing and the intended purpose ERP to encourage the development of affordable alternative renewable sources for everyone. Thank you for your consideration of our request for an informal hearing and resolution.

Sincerely,

David Raine,
CTO DyoCore, Inc.
3125 Tiger Run Court, #104
Carlsbad, CA 92010

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Topic Areas of Discussion in Response to the Proposed Complaint:

In response to Complaint point III A (Purpose of the ERP):

The complaint states that the purpose of the ERP is to stimulate increased sales of small wind systems that have a generating capacity of up to 50 Kilowats ...thereby, encourage manufactures, sellers and installers to expand their operations, improve distribution, and reduce system costs associated with these renewable technologies.

DyoCore's SolAir is exactly why the ERP was created. DyoCore did not develop the ERP and had no part in its designation, rebate structure, amount of rebate or in its management. DyoCore's SolAir developed and being sold at its price point within the market before DyoCore submitted its application to be included into the ERP at the same price point upon inclusion. DyoCore's SolAir is the first product of its kind. It is among the lowest cost turbines on the market; it applies to the broadest range of potential users; and meets all required certifications for use in most CA urban communities. In fact it is in most communities the very first and only residential roof mounted turbine allowed.

DyoCore has worked diligently in development of SolAir, education within the market and the drive behind the acceptance of new policies and regulations that will benefit the entire industry for years to come. DyoCore did this at its own expense, with no grants and no government funding. Because of these accomplishments the ERP now has a venue that applies to the majority of homeowners opposed to the 1% it previously applied to. This is not a burden on the ERP it contributes to the success of the ERP. Removing DyoCore from the listing based on allegations arising from the misunderstood circumstances surrounding DyoCore's application substantially damages the program and interferes with its intended purpose while discouraging the development of new technology and lower cost energy alternatives.

DyoCore's product price point was established before application to the program and before knowledge of the rebate allotted to its product. The end result was that the rebate allotted upwards of 100% towards the full purchase and install of the SolAir system. This was known by the CEC and encouraged by the CEC program management staff. It was never indicated that this was a concern or that DyoCore's price point was a violation of the programs intention. The ERP states directly that it was designated to encourage lower cost products. DyoCore meets that expectation.

In response to Complaint point III B (Requirements and Process for Listing Small Wind Systems as Eligible for Use in the ERP)

Pursuant to Appendix 3, Section (A)(2) of the ERP Guidebook DyoCore provided KEMA with summary monthly data of collected Average Wind conditions with Energy produced for one consecutive year. (Exhibit 2 - Hampshire IL summary data)

In early 2010 DyoCore submitted an application and the materials requested to KEMA. DyoCore collected data from two reporting sites, one in Hampshire IL, the other in San Marcos CA. It was determined by KEMA that the raw data from the site in Hampshire IL would be acceptable due to higher average annual wind conditions. The review and listing of DyoCore's SolAir was done by KEMA, a third party with no affiliation to DyoCore. When the listing was granted DyoCore understood that the rating was based on Annual Average Wind and not based on a specific wind speed. These two are completely different sets of data. At an annual average wind speed of 18mph, which could and did represent times in which winds were substantially greater at both locations, the expected production was 1.8kW. In real-time winds of 18mph the production is approximately 212 watts, this is about 66% of the BETZ maximum 59%. This information was provided and available to KEMA upon application. It was our understanding that the rating was Annual Wind Speed Production and presented, evaluated and determined by KEMA.

A comparison of the two side by side is attached herein. (Exhibit 3 - Annual Wind vs Real Wind with Betz comparison)

When the listing rating was given to DyoCore KEMA contacted us and asked if we wanted to modify our rating from 12mph to a higher rated amount because we had the lowest rating wind speed on the approved list. Most other products were rated at winds well above 30mph. We had felt we were being conservative at only 18mph *(Exhibit 4 - Correspondence with KEMA pertaining rating)* as we felt most Urban areas where our product primarily applied would never experience conditions greater than this. This is a direct indication of our integrity and intention upon acceptance of a listing.

Recently the CEC accepted the listing of another company's product that utilizes the DyoCore PMG. (Exhibit 1 - TLG CEC listing) This product received a rating of 1.6 at approximately 32mph. Regardless of the "wind speed" rating, it has the same effect and outcome of rebate. The only variance is the wind speed at which the rating was applied. However, both our product and this company's product receive the same rebate amount. This is not miss-intention on either party's part, it is simply a lack of formal standards for the purpose of qualification and rating combined with our lack of knowledge within the industry.

The rated wind speed has no correlation towards the rebate amount. Both turbines in the following example use the exact same PMG (Motor) :

DyoCore rated at 18mph at 1.6kW – Rebate amount $3 per Watt or $4800
TLG rated at 30mph at 1.8kW – Rebate amount $3 per Watt or $5400

At the time of listing DyoCore's product SolAir within the ERP program the process was both new to us, to KEMA and to the CEC as only a handful of other products were ever listed with little or no standard in place. Products listed on the approved ERP list demonstrate a wide assortment of wind speeds and corresponding rated performance. There was and still is no fixed standard in place. With approximately 180 products listed (www.consumerenergycenter.org / cgi-bin / ELIGIBLE SMALLWIND) at wind speeds from 42mph[1] to 16mph[2] and power outputs range from 100watts[3] to 1000,000watts[4] it is very confusing as to how power curves apply and how they correlate to a unified rating system.

1	Home Energy International B.V.	Energy Ball V200	2,500W Wind Turbine	2,500	42
2	Hummer Wind Power, LLC/EES Greentech	H2.7-500W	500W Wind Turbine	500	16
3	Jetpro Technology Inc.	JPT-100	100W HAWT Turbine	100	26.9
4	Shanghai Ghrepower	FD20-100/12	100kW Wind Turbine	100,000	26

Table 1: http://www.consumerenergycenter.org/cgi-bin/eligible_smallwind.cgi

DyoCore submitted its application under the expectations that KEMA was the rating authority and tasked by the CEC to qualify all applications to the program. KEMA at the time of evaluating SolAir was under considerable pressure from workflow (Exhibit 10 - KEMA email pertaining workload) which might have contributed to an error in the evaluation of DyoCore's submitted application. DyoCore had never submitted its product to a power curve and had no formal knowledge base or education that would qualify DyoCore or its representatives to formulate a power curve.

It is our intention to continue to move towards meeting requirements for certification as determined by outcome of the new ERP guidelines for qualification. DyoCore has worked with MET and TUV to meet safety and quality standards and continues daily to collect and evaluate site data to better represent performance expectations based on specific install circumstances. DyoCore's website provides quite a bit of continued development material that is made public for the purpose of evaluation of its product and the intended use. http://www.dyocore.com/sphpblog_0511/index.php. Almost 50,000 unique visitors have viewed and participated in our continued development towards smart low cost urban alternative energy solutions.

DyoCore provides the highest level of product warranty – a 100% no questions asked policy on the removal or replacement of a non working system in addition to being the only company with highly trained

professional distributors and installers that in contract support the product 100% after installation through the entire warranty term.

In response to Complaint point III C (Requirements for Securing a Reservation under the ERP)

DyoCore completes all R1 applications to the rules and to the best of its ability to estimate wind conditions based on site evaluations. DyoCore cannot answer directly for its distributors but works diligently and in good faith to educate all its distributors and clients about proper site evaluations and placement of SolAir units in qualified locations. However, the wind is a difficult aspect to estimate with recent changes in the environment and further completed by the Urban landscape where most SolAir units are installed. This is a new market and in most areas the first application of its kind. There are hundreds of Urban area installations throughout CA, some in great locations and some in poor locations. All of which are fairly recent and/or just being completed. DyoCore will continue to collect data and use that knowledge to make better decisions on installation sites but also estimates on production. There unfortunately no history to base these assumptions on.

There were companies that mislead potential clients indicating that they were an authorized Distributor, however they were not and sent formal notices (Exhibit 5 - Notice to Gridnot) to cease all representation of the DyoCore product and notice was given to the CEC (Exhibit 6 - Correspondence from Rick Berry to CEC) that they were not an authorized distributor. We recommended to the CEC that they deny any applications that this company falsely sent in as an authorized representative of our product. This is the only instance known to us of potentially false applications and this was not done on the part or by a representative of DyoCore.

In response to Complaint point V A (Statement of Facts Upon Which the Complaint is Based (1231(b)(3)))

DyoCore supplied information on its website to potential clients throughout California that might apply to the use of its product SolAir and is the same information as referenced and available from the CEC directly on the approved ERP listing posted on the Consumer Energy Center website: http://www.consumerenergycenter.org/cgi-bin/eligible_smallwind.cgi. All information is factual as it applies to the rebate and SolAir, in some applications the purchase of a complete SolAir system as it applies to the guidelines of the ERP could result in 100% of the total cost of the system covered by an approved rebate. Though this is contention of the current purpose towards redraft of the ERP, it was not a contention when DyoCore applied to the program and was further supported by representatives of the CEC (Exhibit 7 - Email from CEC pertaining changing equipment to max out the rebate allotted)

DyoCore does not sell SolAir direct outside of San Diego CA and provided on its website, www.dyocore.com, a link to qualified DyoCore distributors.

In response to Complaint point V B (The listing of the DyoCore Turbine)

During DyoCore's application for CEC ERP inclusion when presented with a power curve by KEMA DyoCore representatives requested that KEMA evaluate if it would be more appropriate for SolAir to be listed at a higher wind speed since all other turbines on the CEC site were listed at substantially higher wind speeds. KEMA agreed and reposted the listing from 12mph to 18mph. During a phone call with KEMA I personally asked KEMA advice on how to list our product and tried to apply it to a listing that was agreed by KEMA to be better suited for wind conditions that might be found at the roof line of a home.

In response to Complaint point V C (Temporary Suspension of the ERP)

DyoCore is not in contention with the redraft of the ERP guidebook and supports the CEC in its objectives of applying a fair incentive program that represents the majority of products opposed to a single product. (Exhibit 8 - DyoCore's Response to the CEC ERP suspension). DyoCore and its distributors acted

honorable and within the program guidelines as outlined and management by the CEC. It is understandable that as new technologies emerge, new manufacturing processes reduce costs and as the industry matures there will be a constant need to modify the program to fit the needs of all participants. We are all hopeful towards the reinstatement and continuance of the ERP in accordance with the CEC's objectives.

DyoCore feels statements towards actual reservations are miss-stated:

1. 33 systems using DyoCore turbines have been installed – We only have warranty data for about 12 completed systems. DyoCore directly from these paid reservations has received approximately $40,000 towards the purchase of SolAir product.
2. 249 approved applications pending – Some of these applications could have been submitted by non-approved and invalid representatives of DyoCore's SolAir. DyoCore has communicated with the CEC on the possible denial of these applications.
3. 1069 applications – it is believed a large portion of these applications were submitted by one company who is not an authorized DyoCore distributor and whereas most if not all of their applications are unqualified and should be denied.

We hope you will take into consideration that DyoCore has not benefited from the ERP program to date. Product is sold near or slightly below costs in some circumstances whereas direct field support is needed. DyoCore distributors can verify that DyoCore has provided exceptional field support for its product beyond the standard industry expectations as the sole cost of DyoCore.

In response to Complaint point V D (The KEMA Report)

DyoCore has never been notified or contacted by any member of KEMA as to a concern about the power curve data.

Data being evaluated in the statements made by Greentech Media on March 15, 2001, as outlined in the Complaint, were unqualified and referenced Annual Average Wind data opposed to data that qualified under the Betz law that was readily available and clearly posted on the DyoCore website. (Exhibit 9 - Power curve data from DyoCore website).

DyoCore never made statements pertaining TUV power curve testing and has formally asked Greentech to correct its statements. TUV has done field safety and quality evaluations on several SolAir turbines to meet the high standards of local community permitting agencies.

DyoCore in good faith summited data to KEMA as the CEC assigned authority and professional independent agent in determining the qualification of the applicant towards a rating with the CEC and the ERP. No one at DyoCore was qualified or indicated qualification to make such assertions towards an applicable rating as it was applied to the program nor did anyone at DyoCore know the methodology in how that rating would be qualified.

In response to Complaint point VI A (DyoCore's Actions Contravene the Purpose of the ERP)

> "The current purpose of the ERP is to incentivize increased sales of small wind systems and fuels cells for on-side generation in California"

DyoCore has become as an applicant of the ERP program the highest demand turbine on the market.

> "and thereby encourage manufacturers,"

DyoCore has opened a new factory in IL and grown by 400% since application into the ERP program and at one point DyoCore employed approximately 30 prior to the suspension of the program.

"sellers, and installers to expand their operations,"

DyoCore's SolAir was represented by over 20 new CA distribution companies, representing upwards of approximately 200 jobs in CA all based on the distribution of the SolAir product.

"improve distribution,"

DyoCore's professional Distributors represented the industry with the highest integrity, thorough product knowledge and training, and highest level of customer education and service.

"and reduce system costs for the end-use consumer."

DyoCore's SolAir was amongst the lowest cost turbines available with the highest level of customer service and support making it applicable to the largest user base in CA.

Based on these facts as outlined in the ERP and broken down above DyoCore is the most successful application ever applied to the ERP program.

In response to Complaint point VI B (DyoCore Violated Appendix 3, Section (A)(2) of the ERP Guidebook by Submitting Operational Data That Does Not Support the Asserted Performance Claims of the DyoCore Turbine)

DyoCore in good faith submitted summary performance data as evaluated from its Hampshire IL installation. How this data was evaluated and applied by KEMA to the ERP is unknown to DyoCore. DyoCore and its representatives made no assertions that they were qualified in the evaluation of the data or how it applied to a listing with the CEC ERP.

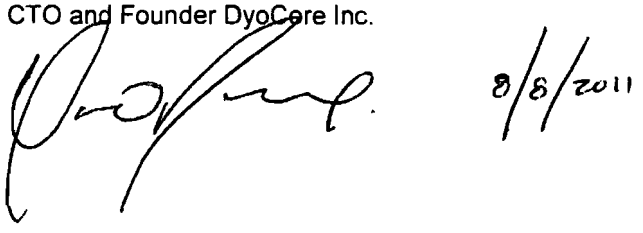
In response to Complaint point VII (Requested Action (1231(b)(5))

DyoCore, its representatives and myself personally request that the facts included herein are taken into consideration towards a fair resolution that applies to all participants that each acted in good faith and to the best intent of the intended program.

The allegation of Fraud on the part of DyoCore has already caused significant and potentially un-survivable damage to the future of DyoCore. DyoCore is a small family owned US company and acted within the highest integrity of the system, constantly striving to grow through education and continued development towards solutions that apply to everyone that has a roof top to place a turbine on at a low cost and the highest obtainable efficiency. I personally request that if a formal complaint is filled and any formal notifications to participants in the ERP are contacted consideration be taken that the alleged intention of fraud be strongly reviewed prior to use of this very damaging allegation whereas no merit to its claim is valid or has been factually presented in the Complaint.

Declaration of Penalty under Perjury. I the undersigned, declare to the best of my knowledge and under penalty of perjury, to the truth and accuracy of all factual allegations contained in this complaint.

David Raine
CTO and Founder DyoCore Inc.



Exhibits and Declarations

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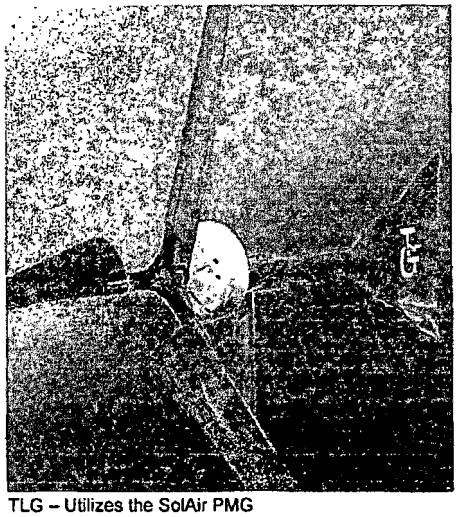
Exhibit 1: TLG CEC Listing

← C ◯ www.consumerenergycenter.org/cgi-bin/eligible_small/wind.cgi

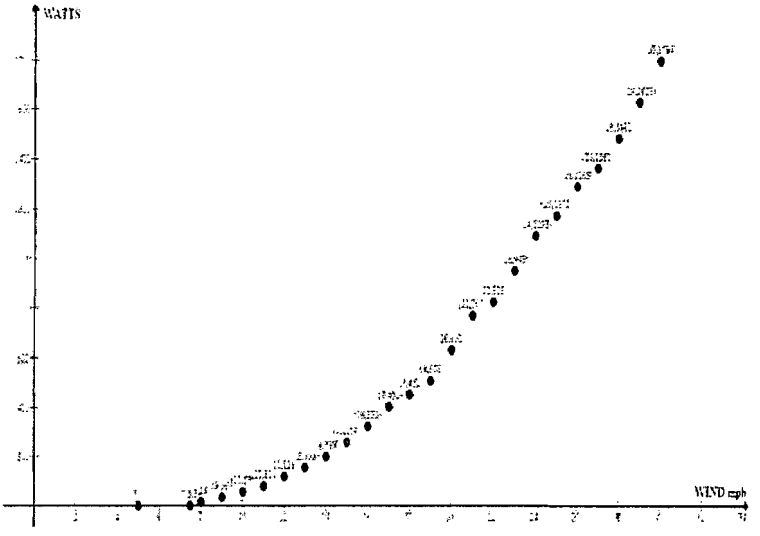
		Turbine		
SWEA USA 6V	WN30000	20,000W HAWT Wind Turbine	20,000	Produces rated power at 22 mph.
SWEA USA 8V	WN1000	1,000W HAWT Wind Turbine	1,000	Produces rated power at 20 mph.
Synergy Power Corporation	S-5000 / S-8	Survivor 830W Wind Turbine	830	Produces rated power at 29 mph.
Synergy Power Corporation	SLG/S300	Survivor 30,000W Wind Turbine	30,000	N/A
TechnoSpin	ComSpin C2000	2,000W HWAT Wind Turbine for Telecom	2,000	Produces rated power at 25 mph.
TechnoSpin	PowerSpin TSW2000	2,000W HWAT Wind Turbine	2,000	Produces rated power at 25 mph.
TECWIND, LLC	TECWIND 6.4	7,500 Watt; HAWT Active Upwind	7,500	Produces rated power at 30 mph
TECWIND, LLC	TECWIND 9.0	30,000 Watt; HAWT Active Upwind	30,000	Produces rated power at 33 mph
TECWIND, LLC	TECWIND 8.0	15,000 Watt; HAWT Active Upwind	15,000	Produces rated power at 30 mph
TECWIND, LLC	TECWIND 4.6	4,500 Watt; HAWT Active Upwind	4,500	Produces rated power at 40 mph
TLG WindPower	TLG-1800-GT	1,800 watt wind turbine, production starts @ 7.5 mph	1,800	Produces rated power at 30 mph
Unitron Energy Pvt, Ltd.	UE 42	4200W Wind Turbine	4,200	Produces rated power at 27 mph.
Unitron Energy Pvt, Ltd.	UE 15	1500W Wind Turbine	1,500	Produces rated power at 23 mph.

TLG – Approved Turbine



TLG – Utilizes the SolAir PMG

← C ◯ www.tlgwindpower.com/images/newgen/TLG_1800_GT_curve.jpg



TLG power curve utilizing the DyoCore PMG – Same motor that is utilized on the SolAir.

← C ◯ www.tlgwindpower.com/images/newgen/TLG_1800_GT_Graph.jpg

Wind in MPH	Hourly Production in Watts	Daily Kwh Production 24 hours	Monthly Production in Kwh 30 days	Yearly Production in Kwh 365 days
7.5	1	.024	.72	8.76
8.0	16	.384	11.5	140
9.0	36	.864	25.9	315
10.0	58	1.392	41.7	508
11.0	81	1.944	58.3	709
12.0	121	2.904	87.1	1059
13.0	155	3.72	111.6	1357
14.0	199	4.776	143.2	1743
15.0	254	6.096	182.8	2225
16.0	320	7.68	230.4	2803
17.0	401	9.624	288.7	3512
18.0	452	10.848	325.4	3959
19.0	508	12.192	365.7	4450
20.0	632	15.168	455.0	5536
21.0	767	18.408	552.21	6718
22.0	823	19.752	592.5	7209
23.0	948	22.752	682.54	8304
24.0	1093	25.2	756.0	9198
25.0	1172	28.128	843.8	10,266
26.0	1288	30.912	9273	11,282
27.0	1361	32.664	979.92	11,922
28.0	1482	35.568	1067.0	12,982
29.0	1628	39.072	1172.16	14,261
30.0	1798	43.152	1294.56	15,750
33.0	2136	51.264	1537.92	18,711

TLG – Power Performance Data

Exhibit 2: Hampshire IL Summary Data

Table 2. Preliminary Duration Results for the Hampshire IL SolAir Install

	Wind	Solar	Hours of production at or above						Wind / Gust Average - limits				T	T	T	T	O
Month	kWh production	kWh production	0	6	8	10	12	>12	Max Wind	Average Wind	Max Gusts	Average Gusts	Hours				%
Jan-09	82.80788203	4.894652	N	N	N	N	N	N	N	N	N	N	350	0	32	2	99%
Feb-09	195.3345042	12.722152	0	9	0	18	79	638	48	16.8	N	N	744	0	0	1	100%
Mar-09	128.782932	12.786694	1	35	0	40	89	555	53.8	16.7	N	N	720	0	0	0	100%
Apr-09	192.5889154	13.336386	7	10	0	27	80	620	59.5	19.1	N	N	744	0	0	6	99%
May-09	94.00400394	12.508624	0	27	0	25	97	595	56.1	16.7	N	N	744	0	0	3	100%
Jun-09	218.5929992	12.999974	0	28	0	39	90	515	60.7	14.8	N	N	672	0	0	0	100%
Jul-09	251.2555455	13.623136	1	53	0	66	184	440	48	13.7	N	N	744	0	0	0	100%
Aug-09	340.6171748	13.84832	0	59	0	69	185	407	41.1	13.1	N	N	720	0	0	0	100%
Sep-09	226.7815714	13.284678	0	103	0	87	199	355	36.5	11.9	N	N	744	0	0	16	98%
Oct-09	296.5248076	13.225654	0	84	0	65	174	397	50.3	13.3	N	N	720	0	0	0	100%
Nov-09	230.5729028	16.680728	0	23	0	29	126	566	48	15.4	24	20	744	0	24	0	100%
Dec-09	218.7764195	15.512214	0	34	0	19	127	564	44.6	15.7	24	20	744	0	0	0	100%
Jan-10	182.7617497	15.84875	10	30	0	37	102	541	40	18.1	24	20	720	0	0	0	100%
Feb-10	212.153999	10.798912	0	46	0	46	104	438	44.6	15.6	27	21	634	0	0	0	100%
Totals:	2659.4	171.3	19.0	495.0	0.0	521.0	1532.0	6193.0	47.0	14.6	24.8	20.3	9744.0	0.0	2.4	1.9	99%

Hours of Power Production for Hampshire IL:
Table 2. shows the duration results for the SolAir installed in Hamshire IL. This unit has accumulated 9,744 hours of total run time with an operational time fraction of 99%.

The low operational time fraction that occurred in September 2009 was a result of changing out the turbine's bearing from bronze to sealed casted bearings. The majority of the remaining time classified as TN during the test is attributed to the wire being twisted up at the base of the unit requiring manual untwisting. This has been solved for current production models with a free swivel joint connection that allows the wires to turn freely 360^0. Wind metering equipment that extended data being recorded from simply wind speeds to include gusts was added in November 2009, this was accompanied by an inspection of the voltage metering equipment and resulted in downtime due to adverse weather conditions that prevented reconnection of the unit until the following day.

Another factor of reliable operation is that the turbine should experience no significant power degradation. Each month the average power is plotted for each wind-speed bin and analyzed for any obvious trends in power production. Examination of power degradation plots indicated no apparent power degradation for either installed location. The dynamic behavior of the turbine is assessed by observing the turbine in a range of operating conditions. The turbine is observed at wind-speed intervals from cut-in wind speed to a maximum experienced wind speed of 53 mph at the Hampshire install site. Tower vibrations, noise, yaw behavior, and tail movement all were periodically documented for evaluations and consideration in reporting the above data.

For the San Marcos install site the following dynamic observations were made. During high winds, the frame will yaw out of the wind between approximately 5 degrees and 30 degrees which was identified as a result of wind blade wash hitting the integrated frame fin assembly. This constant yaw at higher wind speeds allowed the unit to both maintain a lower overall consistent RPM but also prevented the motor from excessive heating. Additionally, it appears that no excessive vibrations are occurring during these conditions. In winds of between 3mph and 15mph both turbines tracked the wind well with no adverse dynamic behavior observations made. No audible noise was detected from either turbine during any of the testing observations.

Power Performance Testing

Power performance testing is conducted per IEC standard 61400-12-1, Power Performance Measurements of Electricity Producing Wind Turbines, referencing Annex H for small wind turbines when appropriate. Products of the test include a measured power curve, a power coefficient (CP) curve, and an estimation of annual energy production (AEP). For small turbines, statistical data is collected in 1-minute sets and sorted into 0.5-m/s-wide wind speed bins. Data collection is complete when the wind speed bins between 1 m/s and 14 m/s contain 10 minutes of data each, and the total database consists of at least 60 relevant hours. Wind speed bins are plotted against the corresponding bin power to produce a power curve. Power curves are normalized to sea-level air density; the site-specific air density at the either observed location is relatively low, 1.0 kg/m3. The power coefficient is the ratio of power generated by the turbine to the power available in the wind. The power curve for the both turbines show power measurements that are greater than rated power. Preliminary power and CP curves for the San Marcos Install as displayed in Figure 3; Both turbines performed as expected.

The original testing voltage equipment on the San Marcos Install was optimized for power performance and was found un-reliable after several months of operation. After the failure, a production model testing solution, Hobo Equipment, was installed and operated until testing was completed with a backup data recorder on the inverter. The preliminary power and CP curves for both configurations are shown in Figure 4.

Sea-Level Air Density Normalized Power Curve
SolAir San Marcos CA

m/s	Mph	Bin Wind Speed m/s	Bin Power kW	Number Data Points	C_p
1.6	3.5	1.554	0	0	0.77
2.1	4.6	2.0424	0.01	1340	0.58
2.6	5.8	2.5752	0.12	1134	0.44
3.1	6.9	3.0636	0.14	903	0.37
3.6	8.1	3.5964	0.41	747	0.30
4.1	9.2	4.0848	0.67	476	0.25
4.6	10.4	4.6176	0.79	276	0.22
5.1	11.5	5.106	0.84	161	0.20
5.7	12.7	5.6388	0.99	65	0.18
6.2	13.8	6.1272	1.17	47	0.16
6.7	15	6.66	1.35	29	0.15
7.2	16.1	7.1484	1.42	15	0.14
7.7	17.3	7.6812	1.56	13	0.13
8.2	18.4	8.1696	1.61	12	0.12
8.8	19.6	8.7024	1.6	8	0.12

Figure 3. Preliminary power and CP data for San Marcos CA Install

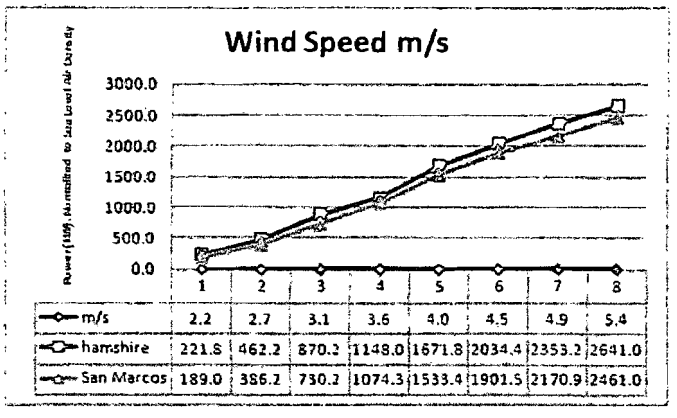


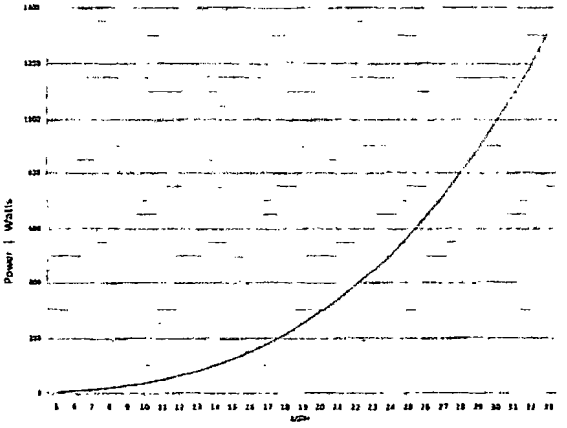
Figure 4. Annual Energy Production (AEP) at sea-level density; 1.225 kg/m^3 for normal power production

Exhibit 3: Annual Wind vs Real Wind with Betz comparison

Table showing SolAir expected power vs BETZ limit at constant wind speeds. SolAir is approximately 66% of the BETZ limit at a Cp of 45%.

mph	Watts	m/s	Betz Max @ .593
1	0	0.4	0
2	0	0.9	0
3	1	1.3	1
4	2	1.8	3
5	5	2.2	7
6	8	2.7	12
7	12	3.1	19
8	19	3.6	28
9	26	4.0	40
10	36	4.5	54
11	48	4.9	72
12	63	5.4	94
13	80	5.8	119
14	100	6.3	149
15	123	6.7	183
16	149	7.2	222
17	178	7.6	266
18	212	8.0	316
19	249	8.5	372
20	290	8.9	434
21	336	9.4	502
22	387	9.8	578
23	442	10.3	660
24	502	10.7	750
25	567	11.2	847
26	638	11.6	953
27	715	12.1	1068
28	797	12.5	1191
29	885	13.0	1323
30	980	13.4	1464
31	1081	13.9	1616
32	1190	14.3	1777
33	1305	14.8	1949
34	1427	15.2	2132
35	1556	15.6	2325
36	1694	16.1	2531
37	1839	16.5	2747
38	1992	17.0	2976
39	2153	17.4	3217

SolAir™ Power Curve
by Wind (mph)



SolAir™ Power Curve
Estimated Annual Power Production by Wind (mph)

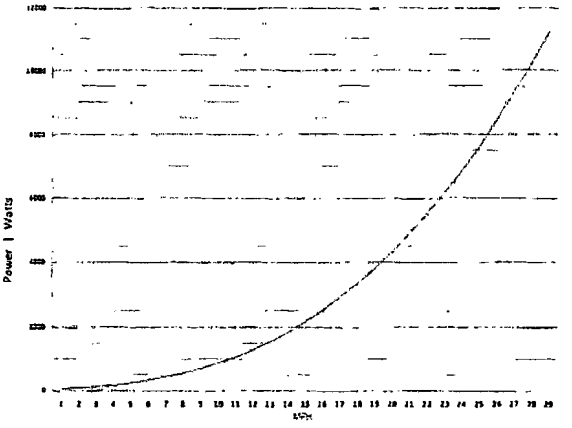


Exhibit 4: Correspondence with KEMA pertaining rating

DyoCore Response to Compliant & Request for Informal Hearing
August 8,2011

From: Baumstark, Pete [mailto:Pete.Baumstark@us.kema.com]
Sent: Tuesday, February 16, 2010 3:45 PM
To: David Raine
Subject: RE: iec data

Looks fine thanks

Pete Baumstark, PE
Energy Engineer

+1 (510) 891-0446 (office)
+1 (510) 891-0446 (fax)
pete.baumstark@kema.com

KEMA
155 Grand Avenue, Suite 500
Oakland, CA 94612

Please visit our website www.kema.com

From: David Raine [mailto:dave@dyocore.com]
Sent: Tuesday, February 16, 2010 3:27 PM
To: Baumstark, Pete
Subject: RE: iec data

Please let me know if this is acceptable:

Manufacturer Name	Model Number	Description	Power Output (Watts)	Notes
DyoCore	S80015dc	SolAir 800W hybrid wind/solar generator	800	Produces rated power at 12 mph.

The 800 W output is based on a 75% load – average load when charging batteries or running a motor or other object in real time plugged directly into an inverter. The output without load at 12mph is approximately 1.5 kW. Most companies rate their products at substantially higher wind speeds. We would like to present a much more realistic rating for the average user of our units. If you have experience in this area it would be helpful in a direction towards correctly labeling our product.

Here are the primary two output tests:

DyoCore Response to Compliant & Request for Informal Hearing
August 8,2011

SolAir - open v.					Watts		Wind Speed	
RPM	Voltage	RPM	V	A	Open	75% Load	mph	m/s
179	9.9						2.5	1.1
213	11.8						3	1.32
300	17.2						3.8	1.672
400	23.9	450	20.5	0.5	10.25	10.25	5	2.2
519	30.5	500	28.5	5.1	145.35	135.15	6	2.64
612	35.9	500	38.3	16.1	616.63	414.96	8	3.52
700	40.6	700	41.2	22.6	931.12	644.1	8.7	3.829
800	47.6	800	46.4	25.5	1183.2	701.35	9.8	4.312
900	51.6	900	50.1	27.3	1367.73	756.21	10.9	4.796
1000	57	1000	53.1	29.5	1566.45	911.25	12	5.28

Best wishes, David Raine

dave@dyocore.com

mobile: 760-807-2135

Desk: 866-404-2428

DyoCore
smart solutions

663 So. Rancho Santa Fe Rd. #610

San Marcos, CA 92078

From: Baumstark, Pete [mailto:Pete.Baumstark@us.kema.com]
Sent: Tuesday, February 16, 2010 8:46 AM
To: David Raine
Cc: rick@dyocore.com
Subject: RE: lec data

So your average wind speed during the tested period is only 6.8 mph?

Pete Baumstark, PE
Energy Engineer

+1 (510) 891-0446 (office)
+1 (510) 891-0440 (fax)
pete.baumstark@kema.com

KEMA
155 Grand Avenue, Suite 500
Oakland, CA 94612

Please visit our website www.kema.com

From: David Raine [mailto:dave@dyocore.com]
Sent: Monday, February 15, 2010 9:38 PM
To: Baumstark, Pete
Cc: rick@dyocore.com
Subject: RE: iec data

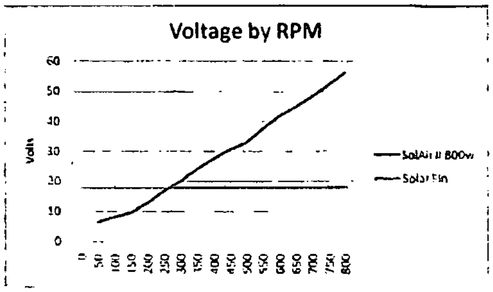
Thank you for your assistance. The units for wind our MPH. I can convert to m/s if preferred.

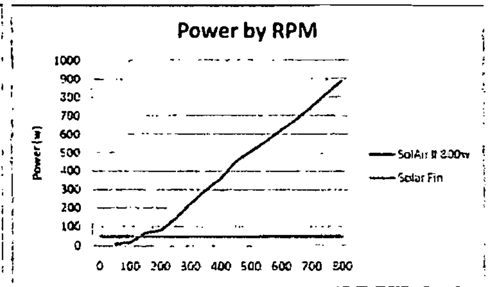
Here is the performance charts. We are a bit conservative but we wanted to apply to very realistic residential conditions:

DyoCore Response to Compliant & Request for Informal Hearing
August 8,2011

Power (W)	0	50	100	150	200	250	300	350	400	450	500	150	600	650	700	750
Rotation (RPM)	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
SolAir II 800w		8	16	64	[illegible]	144	224	276	360	418	454	567	624	690	744	819
Solar Fin	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Voltage (V)	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
Rotation (RPM)	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
SolAir II 800w		6.4	8	9.6	12.8	14.8	20	24	27.2	31.4	32.9	37.6	40.8	44.8	49	52
Solar Fin	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18





Let me know if you have questions. Thank you!

Annual Energy Production

Best wishes, David Raine

dave@dyocore.com

mobile: 760-807-2135

Desk: 866-404-2428

DyoCore smart solutions

663 So. Rancho Santa Fe Rd. #610

San Marcos, CA 92078

DyoCore Response to Compliant & Request for Informal Hearing
August 8,2011

From: Baumstark, Pete [mailto:Pete.Baumstark@us.kema.com]
Sent: Monday, February 15, 2010 12:05 PM
To: rick@dyocore.com
Cc: dave@dyocore.com; Mashnik, Daria
Subject: RE: iec data

Thanks. Please also send a performance curve and also tell me what the units for wind speed are (m/s or mph).

Pete Baumstark, PE
Energy Engineer

+1 (510) 891-0448 (office)
+1 (510) 893-0445 (fax)
pete.baumstark@kema.com

KEMA
155 Grand Avenue, Suite 500
Oakland, CA 94612

Please visit our website www.kema.com

From: rick@dyocore.com [mailto:rick@dyocore.com]
Sent: Monday, February 15, 2010 11:50 AM
To: Baumstark, Pete
Cc: dave@dyocore.com
Subject: Fwd: iec data

Pete Here are the data figures from our tests. The company is Dyocore, the product is a SolAir 800 turbine, David Raine is the CEO of Dyocore and he can answer any questions you may have at 760-807-2135. When I spoke with you regarding the review you told me you could return the results the same day. I could really appreciate your notifying the state immediately if the data is sufficient so we can get listed by March 1, 2010. Our trade show sales in California are extremely successful and we'd like to install into around 45 homes in March. Pete, thanks for any and all assistance. I remain Rick Berry 858-598-5254

----Original Message----
From: David Raine [mailto:dave@dyocore.com]
Sent: Monday, February 15, 2010 12:20 AM
To: rick@dyocore.com
Subject: Iec data

SolAir 800 - Summary Production
Results

Month	Notes	kWh production	kWh production	0	6	8	10	12	>12	Max Wind	Average Wind	Max Gusts	Average Gusts	Hours				%
Sep-08	1,2,3	82.80788208	6.431632	171	103	29	35	12	0	18.4	6.3	N	N	350	72	20	24	91%
Oct-08	4	195.3345042	14.791154	342	262	50	66	21	3	20.7	5.8	N	N	744	0	10	8	99%
Nov-08	5	128.782932	14.15863	341	273	45	36	16	8	25.3	5.5	N	N	720	0	0	16	98%

DyoCore Response to Compliant & Request for Informal Hearing
August 8,2011

Dec-08	6	192.5683154	12.697476	274	326	56	48	18	22	36.8	5.3	N	N	744	0	0	0	100 %
Jan-09	7,8	94.00400394	13.345624	344	317	42	32	7	2	18.4	5.8	N	N	744	110	5	48	92%
Feb-09	9	218.5929992	13.552332	259	251	52	60	28	22	38	7.3	N	N	672	0	0	0	100 %
Mar-09	10	251.2555455	14.882604	270	276	54	90	43	11	24.2	7.4	N	N	744	6	0	48	93%
Apr-09	11	340.6171748	14.950184	165	273	73	112	45	32	29.9	7.2	N	N	720	0	0	24	97%
May-09	12	226.7815714	14.604224	246	291	67	113	27	0	19.6	7	N	N	744	0	2	24	97%
Jun-09	13	296.5248076	15.705282	184	300	67	99	61	9	23	7.2	N	N	720	0	1	0	100 %
Jul-09	14	230.5729028	17.39069	287	234	79	120	24	0	18.4	7.1	N	N	744	0	0	24	97%
Aug-09	15	218.7764195	19.266376	300	245	63	106	30	0	17.3	5.8	N	N	744	0	0	0	100 %
Sep-09	16,17,18	182.7617497	17.642534	319	240	46	92	23	0	21.9	6.3	24	20	720	56	48	86	86%
Oct-09	19	212.153999	18.10679	283	289	59	71	26	16	26.5	6	27	21	744	0	0	0	100 %
Nov-09	20	124.3978237	16.808882	343	273	43	42	13	6	26.5	5.8	26	23	720	1	0	0	100 %
Dec-09	21,22	200.9828667	15.042874	289	312	39	54	28	22	42.6	6.7	39	26	744	0	3	0	100 %
* Jan-10	23,24,25	233.7411242	13.852288	329	274	38	47	15	41	41.4	7.8	43	26	744	4	36	96	86%
Annual - 09		2597.4	191.3	3309.0	3301.0	684.0	991.0	355.0	120.0	25.5	6.6	29.0	22.5	730.0	14.4	4.9	21.2	97%

Just need to now do the data notes and summary content. I should have it done by Wednesday but this might be enough to file with the State right away.

Best wishes, David Raine

dave@dyocore.com

mobile: 760-807-2135

Desk: 866-404-2428

DyoCore smart solutions

663 So. Rancho Santa Fe Rd. #610

San Marcos, CA 92078

Exhibit 5: Notice to Gridnot

Formal notice was given by email and verbally to Gridnot the cease all representation of DyoCore and it's SolAir product line and remove all reference of such from its website in early 2011. The same notice was communicated to the CEC by Rick Berry.

Gridnot is not an authorized DyoCore Distributor and product obtained and installed by Gridnot will not be eligible for DyoCore warranty.

All applications filed by Gridnot that represent SolAir installations are invalid and do not meet the ERP guidelines for acceptance due to invalid warranty.

Exhibit 6: Correspondence from Rick Berry to CEC

TO: David Raine
CEO Dyocore Inc.

FROM: Richard Berry
Compliance Department
Dyocore Inc.

David: In April 2011 I sent an email to James Lee at the State of California Renewable Energy Department regarding a number of R-2's Dyocore had received over the previous six months and would not be using.

Dyocore applied for these with R-1's signed by clients wishing to purchase a small wind system but for one reason or another were unable or unwilling to wait the time it took Dyocore to open the permitting processes in San Diego County to small wind turbines. This effort took one and a half years and cost Dyocore upwards of $100,000.00.

Regardless of the reason for refund, Dyocore honored each and every clients request for rebate and refunded their entire deposit while suffering financial loss on each for handling, permit activities (plot plans, one line drawings, meetings with Local Area Planning Groups, etc.).

Mr. Lee received five of these R-2's and cancelled four of them. One R-2 client subsequently asked to have her system installed and paid the full price for the 5 unit roof mounted small wind turbine system.

I am including this signed memo as I feel it further shows our efforts to be a good corporate neighbor and abide by the rules of the Rebate Program.

SIGNED: **DATED:** 8/3/10

TO: David Raine
CEO Dyocore Inc.

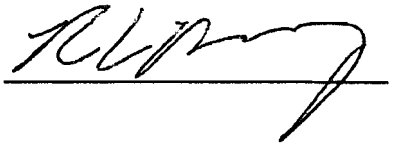
FROM: Richard Berry
Compliance Department
Dyocore Inc.

David: On February 4, 2011 I received an email from Sarah Taheri, State of California Renewable Energy Department (see attached) asking me (in effect) why we were not taking advantage of the full power of our turbine by using larger inverters.

I responded by saying we had been testing a new line of inverters (Aurora, Power One; 3.0, 4.2, and 6.0) as an alternative to the Ginlong Inverter line. Sarah's email was taken to heart and we have upgraded four or five of our planned installs by replacing the old inverter's with the new Power One equivalent.

This email is important because I believe it shows that Dyocore has attempted to stay within the official guidelines of program and has maintained credible practices that are well with the bounds of the spirit of the program.

SIGNED: **DATED:**



8/2/11

From: rick@dyocore.com <rick@dyocore.com>

To: dave@dyocore.com, rick@dyocore.com
Cc:

Date: Wednesday, July 27, 2011 02:40 pm
Subject: Fwd: More info needed

Dave, the attached email from the state should show that we were not bilking the rebate system, in fact under-requesting rebate amounts. This gal is under James Lee. Rick
-----Original Message-----
From: Sarah Taheri [mailto:STaheri@energy.state.ca.us]
Sent: Friday, February 4, 2011 05:50 PM
To: rick@dyocore.com
Subject: More info needed

Hi Rick, Realized there were a few applications that I didn't catch earlier. A few notes and requests: McChesney - utility bill is for address 825 Cape Breton; we need bill for 3030 Overhill. This will receive a rebate of $4808 (equivalent to total system cost), as rated output is limited to 2000 watts due to inverter (rather than 3200 watt capacity of turbines). Almodovar - need more recent utility bill. This will receive a rebate of $4904 (equivalent to total system cost), as rated output is limited to 2000 watts due to inverter (rather than 3200 watt capacity of turbines). The total output of these systems could be increased by installing a larger inverter; granted, this would also increase the total cost and potentially increase the rebate. This may be something you could discuss with the clients if you like. If you choose to change the installations, let me know, as we'll need new paperwork. Thanks, Sarah _____ Sarah Taheri California Energy Commission Efficiency & Renewables Division Renewable Energy Office Tel: (916) 654-3929 Email: staheri@energy.state.ca.us

Attachments:

TO: David Raine
CEO Dyocore Inc.

FROM: Richard Berry
Compliance Dept.
Dyocore Inc.

David: On February 12, 2011 I spoke by telephone with Mr. James Lee at the State of California Energy Commission to inform him that Dyocore was concerned about one of their "distributors". This company is called Gridnot, they had signed a distributorship agreement with Dyocore but had purchased no units for installation although they were writing contracts for huge numbers of systems.

The manager for the distributor network at Dyocore sent a cancellation letter to Gridnot on February 11, 2011 informing them of our concern with their method of selling units and failure to live up to their agreement to purchase units from Dyocore as specified in the agreement.

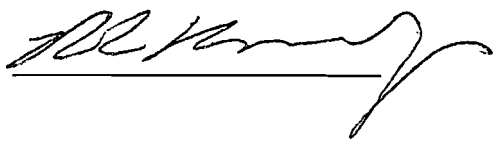
Mr. Lee informed me he had a large stack of Gridnot R-1's on his desk that were not properly filled out and he also had a concern. I informed him that we had information that Gridnot was holding meetings (akin to Tupper Ware Parties) with 10 to 15 people at a time and guaranteeing them complete wind turbine systems if they would put one Dollar ($1.00) down and sign the sales contract and R-1, at no cost to them.

There was no regard or question of wind speeds or even if wind existed in or around the client location. I further informed James that we had cancelled their distributorship agreement and would not renew the agreement.

I am writing this memo and signing it based upon the State's allegation that Gridnot was one of our distributors and has listed it on their complaint to the energy commission. Mr. James Lee can confirm these statements.

In fact Dyocore has filed just 35 R-1's for rebate reservations with the State of California Renewable Energy Program to date and only three of it's clients have received rebate checks.

SIGNED: DATED:



7/30/11

Exhibit 7: Email from CEC pertaining changing equipment to max out the rebate allotted

-----Original Message-----
From: Sarah Taheri [mailto:STaheri@energy.state.ca.us]
Sent: Friday, February 4, 2011 05:50 PM
To: rick@dyocore.com
Subject: More info needed

Hi Rick, Realized there were a few applications that I didn't catch earlier. A few notes and requests: McChesney - utility bill is for address 825 Cape Breton; we need bill for 3030 Overhill. This will receive a rebate of $4808 (equivalent to total system cost), as rated output is limited to 2000 watts due to inverter (rather than 3200 watt capacity of turbines). Almodovar - need more recent utility bill. This will receive a rebate of $4904 (equivalent to total system cost), as rated output is limited to 2000 watts due to inverter (rather than 3200 watt capacity of turbines). The total output of these systems could be increased by installing a larger inverter; granted, this would also increase the total cost and potentially increase the rebate. This may be something you could discuss with the clients if you like. If you choose to change the installations, let me know, as we'll need new paperwork. Thanks, Sarah _____ Sarah Taheri California Energy Commission Efficiency & Renewables Division Renewable Energy Office Tel: (916) 654-3929 Email: staheri@energy.state.ca.us

Exhibit 8: DyoCore's Response to the CEC ERP suspension

DyoCore, Inc.
3125 Tiger Run Court, #104
Carlsbad, CA 92010

P/F 866.404.2428

www.dyocore.com

California Energy Commission
1516 Ninth Street
Sacramento, California 95814

April 18, 2011

California Energy Commission,

Thank you for this opportunity to present and thank you to the committee for your diligent efforts in reinstatement of the ERP.

California created the Renewable Portfolio Standard (RPS). Under the RPS, the Renewable Energy Program's focus is twofold as published;

- To increase, in the near term, the quantity of California's electricity generated by renewable energy resources, while protecting system reliability, fostering resource diversity, and obtaining the greatest environmental benefits for California residents.

- To identify and support emerging renewable energy technologies with the greatest near-term commercial promise that merit targeted assistance.

In 1996 ERP was established as an initiative to promote "wind" but later was re-invested in to promote energy conservation. Then after very few qualified recipients the program evolved into an incentive to promote new technology. This is the current modern direction of the plan. With the recent economy downfall and more direct financial crisis in CA, I think that, now today, the program is also in place to promote jobs and economy within CA.

- Companies like DyoCore are the intended target of the program.

- DyoCore's SolAir is New innovative Technology

- SolAir applies to the largest majority of CA residents who directly funded the program

- DyoCore both as a CA company and through its organization of professional distributors represents 100's of jobs and millions into our economy.

- DyoCore is the forefront company for the momentum created within local communities towards the acceptance and installation of Wind power technology throughout CA and the US.

- SolAir combines wind and solar, this is again the most innovative development of technology towards the ERP's intended objectives.

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Summary concerns with the current ERP:

On March 4th the CEC sent notice that it suspended the renewables rebate program so it may address deficiencies with the program requirements.

The goal of the ERP is to increase the installation of small wind systems and fuel cells

Though the suspension notice indicated "deficiencies with the program requirements", this does not fit well into the intention of the program as outlined.

The most current intention of the program, the state and our country is to promote the development of new technologies.

The concern is the recent large activity of ERP reservations from a single company whereas only a few months ago only a very few manufacturer products applied to a very few qualified recipients. Additionally these products are priced at significantly higher price points.

Now that products are available to a larger quantity of participating recipients Attention is now being placed on the production of energy at installation sites and the method of rating products qualified for the program.

Solution overview:

Separation of wind into specific qualification categories. Currently a power/wind rating incentive applies equally to a vague range of installation sites regardless of the wind conditions. A turbine qualified at 2kW @ 25mph and a turbine qualified at 2kW at 35mph apply to the exact same incentive regardless if either are installed in wind conditions substantially less than the rated wind speed.

By defining wind categories and ratings based on qualified installed locations will strengthen the intended benefits of the program. A turbine should be qualified based on its location and based on the projected power production as applied to that location.

Unfortunately wind experienced at a location can change dramatically from day to day less year to year. A qualified site today might not be qualified next week, however, relevance at the time of qualification and good history data should present a foundation for future expectations. we recommend the consideration of wind, product categories (wind zone categories)

Wind zones specific to turbines in size and intended use can be created that build a foundation for qualifying the program as applied to specific expected conditions. Data is readily available for easy separation of these categories.

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- Micro wind – turbines under 500w or under a specific blade size, usually less than 48" (more appropriate) can only produce so much power and intended use is typically at ground level.

- Low or small wind – Turbines again with a blade diameter under 70' and whereas the intended installation is under 50' fall well into this category.

- Medium wind – installation sites well above 50', typically large pole mount, and with blade diameters exceeding 70" typically apply to this category.

- High wind – greater than 5kW and installed on poles exceeding 100'.

Special circumstances can apply to any category whereas local wind conditions at the intended site could be greater or lower than normally anticipated for the original category. A smaller turbine can be applied to a pole mount application and increase it's expected normal applied performance. The solution is a simple application exception request that can be accompanied with supporting data, installation details and wind analysis.

Summary Conclusion:

The ERP program was designed and is in effect today to:

- make green energy available financially

- create green jobs

- promote green technology

- make CA a green community

- make green products accessible to everyone

Until small wind products like DyoCore the program did not fully accomplish any of these objectives. Manufacturers like DyoCore are the core of the ERP intended results and DyoCore has demonstrated significant success in accomplishing the ERP objectives.

Unfortunately without site qualifications any turbine can be installed in a location that does not meet the intentions of the ERP. If you create site specific guidelines and more specific product categories for incentive qualification you can distinguish between productive and non-productive installations.

An incentive that varies based on the installed location and turbine size creates a powerful tool that maintains the direction of the program as designated.

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DyoCore notes from ERP workshop

Presentation moderator – Anthony NG

April 14, 2011

1. Primary stated barrier and cause to suspension of the ERP; Rebate amounts applied for in reservations covered most and in some all costs of the systems resulting in systems being installed that could possibly have little owner vested interest in the success of the application.

   Response:

   This is a direct correlation with over inflated Industry pricing / overpriced products. ERP was projected to bring down costs. New tech is less expensive and opens doors for greater deployment. New technology and resources for manufacturers present lower price point advantages and in turn will drive down pricing – this in turn is a benefit to the program and its success.

   The program as it is priced today should remain the same and be a tool to reward companies that maintain lower cost margin products and an incentive for larger turbine manufacturers to reduce highly over inflated price points.

   Manufacturers already have tremendous pressure to assure the success their products as installed and spend considerable resources to assure installations meet expectations.

2. It was presented that a $ per kWh produced annually could be applied.

   Response:

   If backed by an upfront incentive as applied to an annual objective it could be a good solution. However, we caution that any program with a spread out rebate structure will provide barriers to financing for product sales. If banks are unable to provide financing for installation of proposed/qualified systems due to lengthy repayment of their funds the sales agents will not have the resources needed to maintain growth within the market.

   A potential solution is the state initiates a direct funding incentive and provides the rebate based on pre-qualified conditions which then apply to a term loan or other method of payback over time that is funded through the existing program.

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3. Bergey presented that they, Bergey, are the only qualified product. Bergey presented that the list should be scrubbed. Mike Bergey is on the SWCC board and has already demonstrated extreme bias towards the industry – specifically towards "small wind".

   Response:

   All turbines installed in California by simple permitting standards have to present extensive 3rd party engineering, testing and performance proof prior to being issued a permit for installation. Even if a product acquires CEC listing, it will not be able to pull a permit until it can demonstrate it meets all the current applicable standards.

   Proper equality in listing should be given to all companies. Manufacturers should not hold positions that allow discrimination against other companies. Any 3rd party certification body should be completely independent. To force companies to meet a standard that is enforced and managed by distributors directly is in conflict with the intentions of a fair program.

   The ERP does and should encourage tech and its continued development. We cannot simply dismiss new development of tech and remove these tools from the eligibility, this is completely opposite of the ERP program. Without encouragement and resources of new tech there will be no new tech.

4. Listings at fixed wind speeds. It was discussed that turbines have arbitrary wind speed listings.

   Response:

   This is a valid point. Wind ratings are arbitrary and only effective if a turbine is installed in the rated conditions. This is highly unlikely. Most turbines will never experience the amount of wind they are rated for. 99% of the contributors to the program do not experience winds that most of the qualified products are listed at.

   Ratings should be based on realistic expectations as related to the specific install site. A turbine size and intended use is a great indication of its performance.

   Breaking up turbines into respective categories that label them for specific expectations and incentive consideration is a key method in the success of the program.

5. Site wind analysis reporting

   Response:

   Education is a primary solution, a wind turbine needs wind, an unqualified location damages the success of the program, distributors and manufacturers.

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High variable wind conditions make it difficult to do site evaluate in dense areas most applicable to the majority

Simple tools are fairly readily available for local area conditions through accumulated wind data but not always specific to a site. Possibly within several blocks and if specific to turbines than only applicable to 60' poles. Tools like Wind Cad are very expensive and only applicable to larger pole mounted turbines. They have no relevance on low wind and the majority of intended applications in California.

Large costs of formal assessments could be greater than the cost of the power benefit and possibly the cost of the system

Qualified professional installers should be held accountable for bad decisions. Training and certification by the ERP or CEC will provide the resources for distributors to make smart installation decisions.

Great source for residential and small commercial low wind analysis:
http://www.wunderground.com/wundermap/

6. Certification qualification for ERP inclusion

   Response:

   Limited and expensive resources towards 3rd party testing, standards have not yet been formally accepted towards certification, no current standard exists or is agreed upon within the wind field directly. But readily available professional and recognized 3rd parties exist and are already required prior to a permit or installation being done in California.

   Standards for safety already exist, are excepted by state codes and provide a solid foundation for qualification. Safety and quality should be the primary factor IEC standards present a very good guideline and 3rd party NRTL companies have done qualified testing for safety and engineering for years.

   The current CEC qualification does not need to be changed. Any CA city or community already has a very stringent installation/permitting process to assure safety and quality standards are met. All of which already highly exceed any state minimums.

7. Combining solutions into the ERP (wind, solar, fuel cells)

   Response:

DyoCore, Inc.
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Simple process for applying Additional Benefits to tie together wind, solar as a combined application.

Separation of fuel cells that could substantially improve wind, solar performance. A direct incentive would encourage important tech development in this direction. Similar to solar now.

8. Add a cost cap based incentive

   Response:

   Avoid cost cap, this encourages overpricing. Lower cost turbines move the market in the right direction holding manufactures to fair market prices.

We appreciate your consideration in reviewing our comments towards your objectives in reinstatement of the ERP.

Sincerely,

David Raine
CTO, DyoCore Inc.
760-580-4271
dave@dyocore.com

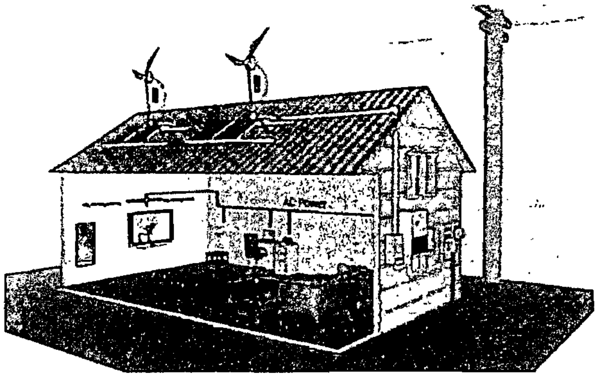
cc
Assemblyman Martin Garrick
1910 Palomar Point Way, #106
Carlsbad, CA 92008

Exhibit 9: Power curve data from DyoCore website

www.dyocore.com/sphpblog_0511/index.php?entry=entry110608-120151

Updated power curve / Solar add on overview

[illegible] **Technology**



The Aurora has an efficiency curve for conversion. The attached is a fairly close extrapolation of the conversion efficiency percentage – see the last column;

	Number of SolAir Units								
[illegible]	Watts 1 Unit	Single Unit Amps	Watts 2 Units	Watts 3 Units	Watts 4 Units	Approx RPM	Approx. MPH	[illegible]	Conversion Efficiency Curve
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	7	[illegible]	6	12	16	152	5	2 74	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	50	[illegible]	[illegible]	8	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	125	157	[illegible]	[illegible]	12	5 33	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	200	2 09	[illegible]	[illegible]	440	557	16	7 15	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	415	3 46	623	[illegible]	[illegible]	[illegible]	[illegible]	9 39	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	6 02	1433	2149	[illegible]	[illegible]	27	12 07	65%
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	1146	9 47	2293	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	9 01	[illegible]	[illegible]	[illegible]	[illegible]	32	14 75	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

SolAir and Aurora http://www.dyocore.com/sphpblog_0511/index.php?entry=entry110130-214346

Sunday January 30 2011, 09:43 PM **Technology**

	Power Curve Watts Setting by Number of SolAir Units - Parallel						
volts	1 Unit	2 Units	3 Units	4 Units	Approx RPM	Approx. MPH	Conversion Efficiency
30	5	6	8	11	150	4	5%
40	10	11	17	22	192	6	7%
50	20	22	33	44	228	7	12%
60	40	44	66	88	269	9	18%
70	75	83	124	165	336	11	23%
80	160	176	264	352	378	15	35%
90	287	316	474	632	419	18	40%
100	418	459	689	919	467	21	45%
110	552	828	1242	1656	508	23	50%
120	690	1035	1553	2070	555	25	55%
130	847	1271	1906	2541	603	26	60%
150	1228	1842	2763	3684	722	30	70%
160	1468	2203	3304	4405	764	32	75%
170	1676	2514	3771	5029	810	33	80%
180	1820	2730	4095	5460	858	34	85%
190	1940	2909	4364	5819	905	35	90%

DyoCore's SolAir in conjunction with Power One's Aurora Wind line of Inverters provides an out of the box solution for the residential small wind customer. Optimization still needs a bit of work but with current technology it's a very close match.

SolAir produces upwards of 300v DC, the Aurora peak input is 600v (580v max recommended by Aurora) with optimal input for peak conversation at approximately 250v. though a single SolAir still presents barriers due to the wide and quick variance of power created during turbulent wind conditions which are the most common found in low wind residential applications, 3 or more units is optimal and provide for the best connection start up and conversion results.

Having enough wind, approximately 8mph annual conditions or greater, and optimizing the Aurora power curve for the specific install wind conditions is key to the success of efficient energy conversion.

Pulling power from a turbine is like applying the brakes to a car. It will both slow the momentum of the blades and create a delay in momentum to get back to peak rotation. This combined with rapid changing wind conditions is a difficult to manage combination. The aurora will moderately apply the brakes, when pulling power, this causes the turbine to slightly slow, reduce voltage output and allow the aurora to drop to a lower power curve setting then in turn taking off the brakes and allowing the turbine to catch up in momentum. When a power curve is too aggressive or passive it could substantially accentuate the applied brakes or momentum required from brake recovery to catch back up to an optimized power conversion. This is most commonly experienced in the lower voltage/power curve settings.

SolAir begins power conversion, in combination with the Aurora, at about 160rpms or approximately a consistent 11mph wind. applying the brakes too hard in this power range will prevent the SolAir from gaining higher rpm momentum. if the known wind conditions are lower, under 10mph annually, setting the first few power curve settings conservatively will allow the turbine available momentum to build up and maintain higher rpm and higher conversion efficiency.

From our current in house testing we know the following:

1. A single SolAir will start up the Aurora at a constant wind of approximately 11mph or greater. Approximate RPM startup is 160rpm. Approximate voltage startup is 50v

2. Three SolAir Solar Panels wired in Series are sufficient to keep the Aurora on for several hours in daylight. They are not enough to start up the Aurora on their own.

3. Approximately 5 to 6 SolAir Solar panels wired in series are required to provide sufficient power to start up the Aurora.

4. An unlimited amount of SolAir units can be tied to the Aurora in Parallel configuration.

5. Any configuration that has the potential to create more than 700v will damage the inverter. This would indicate that a maximum of two SolAir units can be fed into the inverter in Series configuration.

Exhibit 10 - Kema email pertaining workload

Rick,

Please feel free to call me on my cell with your questions.

Unfortunately we've been kind of snowed under with processing module requests since around June. When I did this job from 2005-2007, we'd maybe get 20 to 30 module requests a month. Now we're getting around 200 per month (mostly from China). So Daria has trouble getting back to everyone individually.

I'll be mostly around through the holidays and if you're working, please feel free to call me any time. I tried calling the number listed below, but got no answer.

Thank you,

Pete Baumstark –
KEMA, Inc.
cell: (408) 826-1435

From: Mashnik, Daria
Sent: Thu 12/24/2009 10:35 AM
To: Baumstark, Pete
Subject: Please get back to this individual. I didn't have a chance yet.

Pete -

Can you follow up with this person from Dyocore? I haven't had a chance yet. He e-mailed me twice. Thanks!

Best regards,
Daria S. Mashnik

Energy Engineer
KEMA Services, Inc

DyoCore Response to Complaint Against DyoCore, Inc. by the California Energy Commission, Executive Director, Robert P. Oglesby

Docket no. 11-CAI-03

PROOF OF SERVICE (original sent via Email to all recipients: 8/8/11)

Respondent

David Raine, CEO
DyoCore Inc.
3125 Tiger Run Court, #104
Carlsbad, CA 92010

Response sent to:

Applicant

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DECLARATION OF SERVICE

I, Ryan Foster, declare that on, 8/22/11, I served and filed copies of the attached DyoCore Response dated 8/8/11. The original document, filed with the Docket Unit or the Chief Counsel, as required by the applicable regulation, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [http://www.energy.ca.gov/renewables/emerging_renewables/11-cai-03/index.html]. The document has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit or Chief Counsel, as appropriate, in the following manner:

(Check all that Apply)

For service to all other parties:

_X_ Served electronically to all email addresses on the Proof of Service list;

_X_ Served by delivering on this date, either personally, or for mailing with the United States Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses **NOT** marked "email preferred."

AND

For filing with the Docket Unit at the Energy Commission:

_X_ by sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (preferred method);

OR

____ by depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION – DOCKET UNIT
Attn: Docket No. 11-CAI-03
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:

____ Served by delivering on this date one electronic copy by email, and an original paper copy to the Chief Counsel at the following address, either personally, or by depositing in the mail.

California Energy Commission
Michael J. Levy, Chief Counsel
1516 Ninth Street MS-14
Sacramento, CA 95814
mlevy@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

Ryan Foster