

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5712350

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
STEPHEN K RHYNE	11/14/2017
PAVEL V. TSVETKOV	11/10/2017
RECEIVING PARTY DATA	
Name:	NUGEN, LLC
Street Address:	158 CHEROKEE ROAD
City:	CHARLOTTE
State/Country:	NORTH CAROLINA
Postal Code:	28207
PROPERTY NUMBERS Total: 3	
Property Type	Number
Application Number:	16566977
Application Number:	16566958
Application Number:	16566965
CORRESPONDENCE DATA	
Fax Number:	
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
Phone:	704-444-1000
Email:	usptomail@alston.com
Correspondent Name:	ALSTON & BIRD LLP
Address Line 1:	BANK OF AMERICA PLAZA
Address Line 2:	101 SOUTH TRYON STREET, SUITE 4000
Address Line 4:	CHARLOTTE, NORTH CAROLINA 28280-4000
ATTORNEY DOCKET NUMBER:	535694/535693/535692
NAME OF SUBMITTER:	MIRANDA M. SOOTER
SIGNATURE:	/Miranda M. Sooter/
DATE SIGNED:	09/11/2019
Total Attachments: 10	
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ASSIGNMENT - WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and in accordance with the obligations of the undersigned inventors to assign the "Application" to NuGen, LLC, under the Advisory Agreement (executed on March 28, 2017) between Pavel Tsvetkov and NuGen, LLC, each undersigned inventor has sold and assigned, and by these presents hereby sells and assigns, unto NuGen's designee

NuGen, LLC
158 Cherokee Road
Charlotte, North Carolina 28207

its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries in and to the invention in **"INTEGRATED SYSTEM FOR CONVERTING NUCLEAR ENERGY INTO ELECTRICAL, MECHANICAL, AND THERMAL ENERGY AND METHODS FOR USING THE SAME"**

as set forth in these United States Patent Applications

- executed concurrently herewith
- executed on _____
- Application No. _____; filed _____
- Application claims priority from Application No. _____, filed _____, all applications listed above being hereinafter referred to as the "application(s)";

(We hereby authorize and request the Assignee and its attorney, (Alston & Bird LLP) to insert above the application number and filing date of said application when known.)

said application for United States Letters Patent, including all divisional, renewal, substitute, continuation, nonprovisionals, continuation-in-parts, and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues, reexaminations, and extensions of Letters Patent granted for said inventions or upon said applications and every priority right that is or may be predicated upon or arise from said inventions, said applications, and said Letters Patent; said Assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said Assignee or otherwise as said Assignee may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America being hereby authorized to issue or transfer all said Letters Patent to said Assignee in accordance herewith; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right theretofore given, and that the undersigned will do all acts reasonably serving to ensure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said Assignee all lawful documents including petitions,

specifications, oaths, assignments, invention disclaimers, declarations, and lawful affidavits in form and substance which may be requested by said Assignee, to furnish said Assignee with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may embody said inventions, and to testify in any proceedings relating to said inventions, patent applications, and/or Letters Patent.

This Assignment is deemed to be effective at least as early as the earliest priority date.

The undersigned hereby grant(s) an authorized representative of Assignee the power to insert in this Assignment any further identification that may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

[Signature] (Signature) Date: 11/10/2017
Pavel V. TSVETKOV

State of Texas)

County of Brazos)

I, Debra Greer, a Notary Public for said County and State, do hereby certify that Pavel V. TSVETKOV personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 10 day of November, 2017.



[Signature]
Notary Public

My commission expires 06/01/2019

- OR -

First Witness

Date

Printed Name of First Witness

Second Witness

Date

Printed Name of Second Witness

PATENT ASSIGNMENT

THIS ASSIGNMENT, made by, Stephen K. Rhyne, hereinafter referred to as Assignor;

WHEREAS, Assignor has previously acquired rights, title, and interest in and to the patents and/or patent applications identified on the attached Schedule A, in and to all corresponding patents and/or patent applications worldwide, and in and to the inventions represented thereby (all hereinafter referred to as the "Patents"); and

WHEREAS, NuGen, LLC, having its principal place of business at 158 Cherokee Road, Charlotte, North Carolina 28207, hereinafter referred to as Assignee, is desirous of acquiring the entire right, title, and interest in and to said Patents and in and to the inventions represented thereby; and

WHEREAS, the parties have agreed to the Assignment hereinafter set forth;

NOW, THEREFORE, To All Whom It May Concern, be it known that as a contribution to capital of Assignee and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the above Assignor has sold and by these presents does hereby sell, assign, transfer, and convey unto the said Assignee, its successors and assigns, the Assignor's entire right, title, and interest in and to said Patents and the inventions represented thereby, and any and all continuations, continuations-in-part, or divisions thereof, and any and all Letters Patent or reissues, reexaminations, or extensions thereof which may be granted therefor or thereon, to the full end of the term for which said Letters Patent may be granted, together with the right to claim priority in all countries in accordance with the International Convention; all rights corresponding to said Patents in all countries throughout the world; and all of its rights to sue for past infringement of said Patents worldwide, together with all claims for damage by reason of past infringement of said Patents, with the right to sue for, and collect the same for Assignee's own use and enjoyment; all to be held and enjoyed by said Assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by Assignor if this assignment and sale had not been made.

From time to time after the date hereof, at the request of either party hereto, and at the expense of the party so requesting, each of the parties hereto shall execute and deliver to such requesting party such documents and take such other action as such requesting party may

reasonably request in order to consummate more effectively the transactions contemplated hereby.

This Assignment is deemed to be effective at least as early as the earliest priority date.

IN WITNESS WHEREOF, the Assignor has caused this assignment to be executed this 14th day of November, 2017.

ASSIGNOR:

Stephen K. RHYNE

[Signature]

(Signature)

Date: 11/14/2017

Stephen K. RHYNE

State of North Carolina)

County of Mecklenburg }

I, Jolene Beatty, a Notary Public for said County and State, do hereby certify that Stephen K. RHYNE personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 14th day of November, 2017.



[Signature]
Notary Public

My commission expires MY COMMISSION EXPIRES AUGUST 18, 2022

- OR -

First Witness

Date

Printed Name of First Witness

Second Witness

Date

Printed Name of Second Witness

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Page 3 of 8

IN WITNESS WHEREOF, the Assignee has caused this assignment to be executed this 14th day of November, 2017.

ASSIGNEE:

NuGen, LLC

By: [Signature]

Print Name: Stephen K. Rhyne

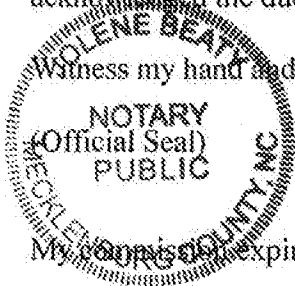
Title: Manager

State of North Carolina

County of Mecklenburg

I, Jolene Beaty, a Notary Public for said County and State, do hereby certify that **Stephen K. RHYNE of NUGEN LLC** personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 14th day of November, 2017.



[Signature]
Notary Public

My Commission expires _____ MISSION EXPIRES AUGUST 18, 2022

- OR -

First Witness

Date

Printed Name of First Witness

Second Witness

Date

Printed Name of Second Witness

SCHEDULE A

Country	Application No.	Filing Date	Patent No.	Issue Date	Title
US	60/323,506	9/19/2001	-	-	Nuclear-Fueled Power Generating System
US	10/244,187	9/16/2002	6,877,309	4/12/2005	Nuclear-Fueled Power Generating System
US	11/065,257	2/24/2005	7,073,319	7/11/2006	Nuclear-Fueled Power Generating System
US	15/809,652	11/10/2017			Integrated System for Converting Nuclear Energy Into Electrical, Mechanical, and Thermal Energy and Methods For Using The Same*

RESEARCH AGREEMENT ASSIGNMENT

THIS ASSIGNMENT, made by, Stephen K. Rhyne, hereinafter referred to as Assignor;
WHEREAS, Assignor has previously acquired certain rights, duties, and obligations as set forth in Research Agreement No. 12-0020 executed on September 13, 2011 (the "Research Agreement") between Texas Engineering Experiment Station and Stephen K. Rhyne; and

WHEREAS, NuGen, LLC, having its principal place of business at 158 Cherokee Road, Charlotte, North Carolina 28207, hereinafter referred to as Assignee, is desirous of acquiring Assignor's entire rights, duties, and obligations in and to said Research Agreement; and

WHEREAS, the parties have agreed to the Assignment hereinafter set forth as acknowledged at Paragraph 17 of the Research Agreement;

NOW, THEREFORE, To All Whom It May Concern, be it known that as a contribution to capital and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the above Assignor does hereby transfer unto the said Assignee, its successors and assigns, Assignor's entire rights, duties, and obligations in and to said Research Agreement; all to be held and enjoyed by said Assignee, and its successors, as fully and entirely as the same would have been held and enjoyed by Assignor if this assignment had not been made; and

Assignee does hereby assume all rights, duties, and obligations in and to said Research Agreement and agree to be bound by said Research Agreement to the extent that terms of the Research Agreement require such binding following this transfer; such assumption shall bind said Assignee and its successors, as fully and entirely as the same would have bound Assignor if this assignment had not been made.

From time to time after the date hereof, at the request of either party hereto, and at the expense of the party so requesting, each of the parties hereto shall execute and deliver to such requesting party such documents and take such other action as such requesting party may reasonably request in order to consummate more effectively the transactions contemplated hereby.

IN WITNESS WHEREOF, the Assignor has caused this assignment to be executed this

14th day of November, 2017.

ASSIGNOR:

Stephen K. RHYNE

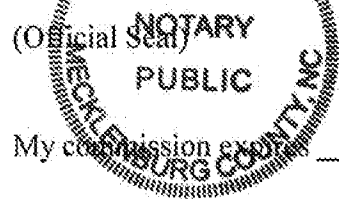
[Signature] (Signature)
Stephen K. RHYNE

Date: 11/14/2017

State of North Carolina }
County of Mecklenburg }

I, Jolene Beatty, a Notary Public for said County and State, do hereby certify that **Stephen K. RHYNE** personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 14th day of November, 2017.



[Signature]
Notary Public

My commission expires 08/16/2022 MY COMMISSION EXPIRES AUGUST 16, 2022

- OR -

First Witness

Date

Printed Name of First Witness

Second Witness

Date

Printed Name of Second Witness

IN WITNESS WHEREOF, the Assignee has caused this assignment to be executed this 14th day of November, 2017.

ASSIGNEE:

NuGen, LLC

By: SK Rhyne

Print Name: Stephen K. Rhyne

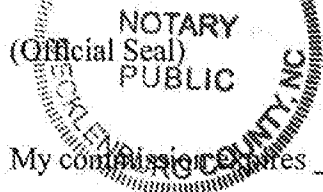
Title: Manager

State of North Carolina

County of Mecklenburg

I, Joleen Beatty, a Notary Public for said County and State, do hereby certify that **Stephen K. RHYNE** of **NUGEN LLC** personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 14th day of November, 2017.



Joleen Beatty
Notary Public

- OR -

First Witness

Date

Printed Name of First Witness

Second Witness

Date

Printed Name of Second Witness