Mr. Jonathan McMahon CEO
AUREON ENERGY LTD
118 Vista del Mar #3
Pismo Beach, CA 93449

11 June 2020

Honorable Dan Brouillette
Secretary of Energy

Dr. Rita Baranwal
Assistant Secretary for Office of Nuclear Energy

United States Department of Energy
1000 Independence Ave. SW
Washington DC 20585
202-586-5000

Subject: **Letter of Intent (LOI) – SAFIRE Reactor Project**

Reference: **Advanced Reactor Demonstration Program (ARDP)**
Funding Opportunity Number: DE-FOA-0002271

Dear Honorable Brouillette / Dr. Baranwal:

Aureon Energy Limited is please to submit this LOI in response to the referenced Funding Opportunity Announcement (FOA) of May 14, 2020.

The attached presentation sets forth for consideration all salient aspects and ongoing accomplishments of the SAFIRE Reactor Project. Please note that a working reactor is already in operation; indeed SAFIRE is already in the commercial development phase:

> SAFIRE is available for demonstration to the DOE Office of Nuclear Energy, and for the purposes of the Reference, Aureon would be pleased to host your office for that purpose at your earliest convenience.

It is in the context of existing demonstration capability that this LOI is submitted pursuant to two FOA categories:

1.1.1. Advanced Reactor Demonstrations (Demos).
1.1.2. Risk Reduction for Future Demonstrations (Risk Reduction)

United States Owned Entities

For the purposes of this LOI, currently Aureon fulfils and agrees-to all requirements set forth under §910.124(d)(3). Aureon is currently completing all requirements to satisfy the 'United States owned entities' as specified under 2 CFR 910.124.

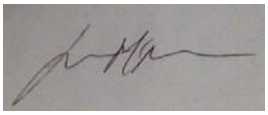
Aureon is pleased to announce that all documentation in these regards will be completed and submitted under the FOA deadline of 12 August 2020.

Registration Process for Submitting Applications

Aureon is pleased to announce that all documentation in these regards will be completed and submitted under the FOA deadline of 12 August 2020.

Please do not hesitate to contact us at any time.

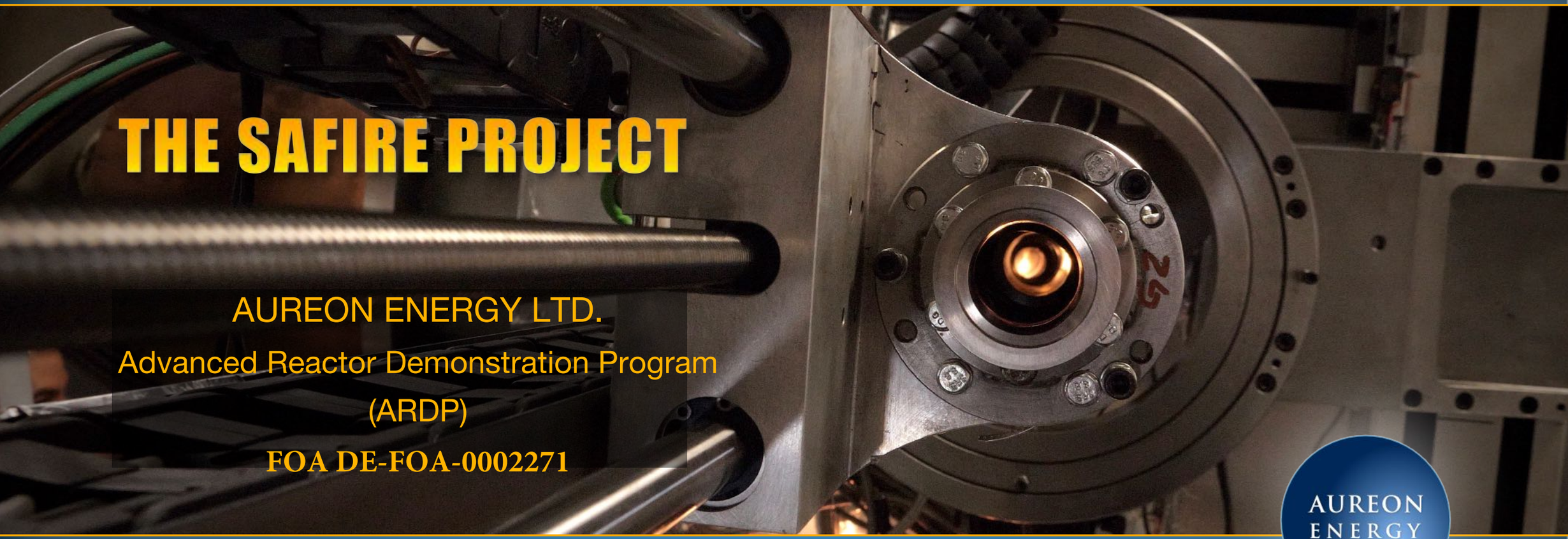
Respectfully yours,



Jonathan McMahon
CEO

Montgomery Childs
Founder & President

Attachment



THE SAFIRE PROJECT

AUREON ENERGY LTD.

Advanced Reactor Demonstration Program

(ARDP)

FOA DE-FOA-0002271

AUREON ENERGY

Commercializing a clean Plasma Reactor

EXECUTIVE SUMMARY

$15 million dollars in cash and kind, and 7 years of empirical testing, have resulted in a unique patented stable spherical “SAFIRE” plasma reactor. AUREON ENERGY will commercialize the SAFIRE technology into four key markets:

> clean energy production,
> heating,
> transmutation of elements (creating Rare Earth Elements),
> remediation of nuclear waste.

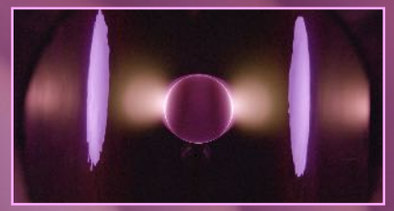
Each market in itself represents a trillion dollar industry over the next ten years. All intellectual property and equipment created in the SAFIRE PROJECT has been assigned to Aureon Energy Ltd.

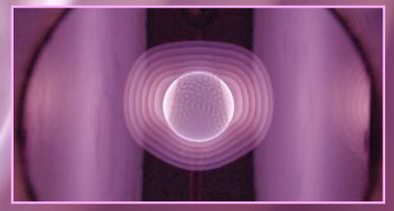
The core in the SAFIRE Plasma Reactor

THE SAFIRE PROJECT~ ORIGINS

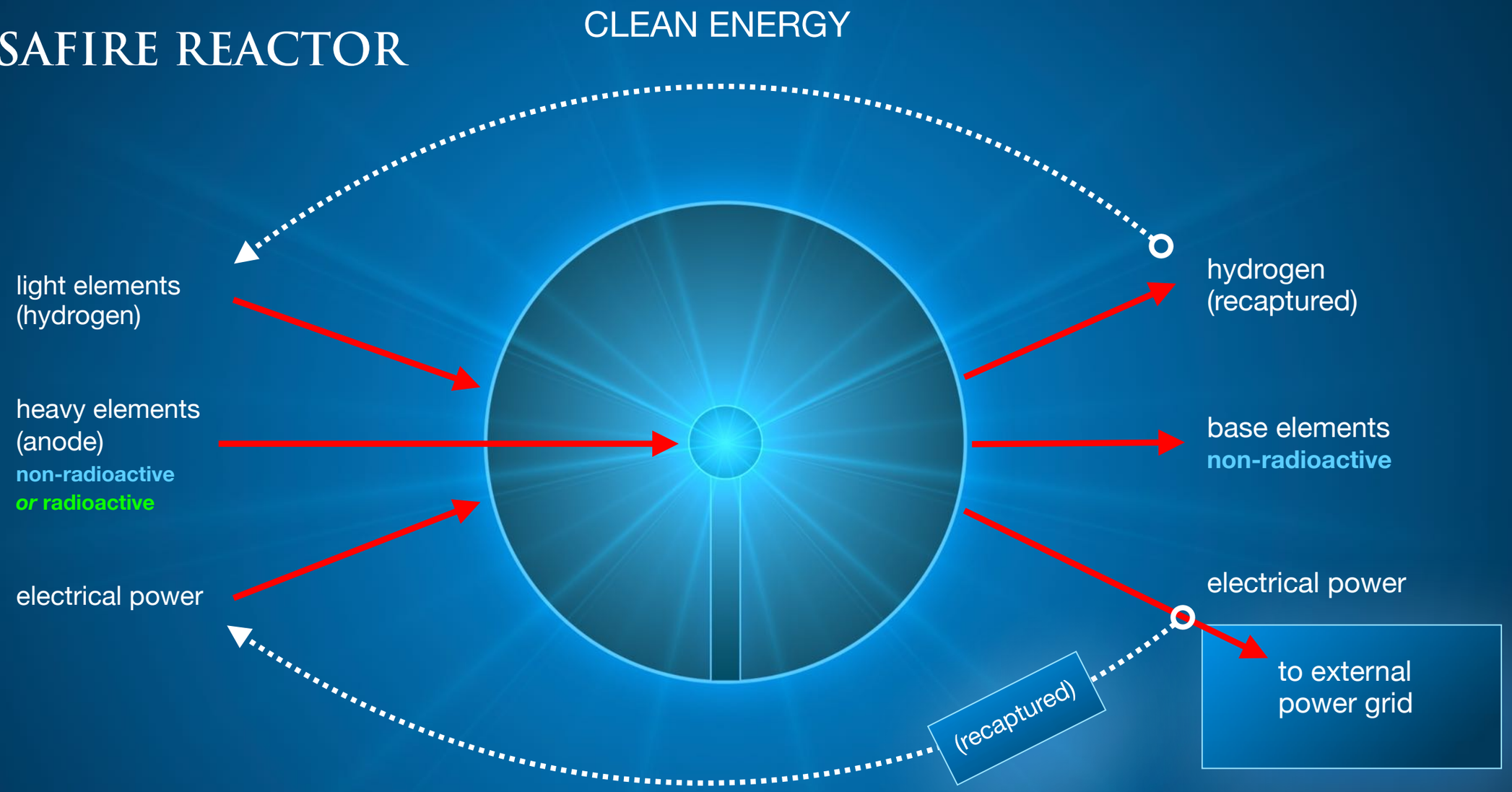
The SAFIRE team was able to create, control, contain, *sustain* and repeat-at-will numerous specific plasma regimes. A medium-energy stable plasma was discovered that can *transmute elements*, releasing unpredicted amounts of energy.

SAFIRE plasma regimes





SAFIRE REACTOR



boiling water > turbine > electric power

COMPANY TIMELINE

2011-2014

PLANNING & PROOF OF CONCEPT

Team of engineers and physicists gather to design and build the first stable plasma reactor capable of safe nuclear transmutation.

International Science Foundation (ISF) Funding secured in 2013.

2015-2017

DESIGN & TESTING OF NEW REACTOR

SAFIRE Reactor built and tested.

Results:

> self-organizing electro-magnetic plasma

> creating new elements in the chamber

> excess energy

2018-2019

REFINING PLASMA MODES & DEFINING PARAMETERS

Confirmed elemental transmutation - new elements created in the chamber.

Confirmed excess energy produced under certain conditions.

AUREON ENERGY is formed to exploit these discoveries.

2020-2025

LAUNCH & COMMERCIALIZATION

Phase I

Phase II

Phase III

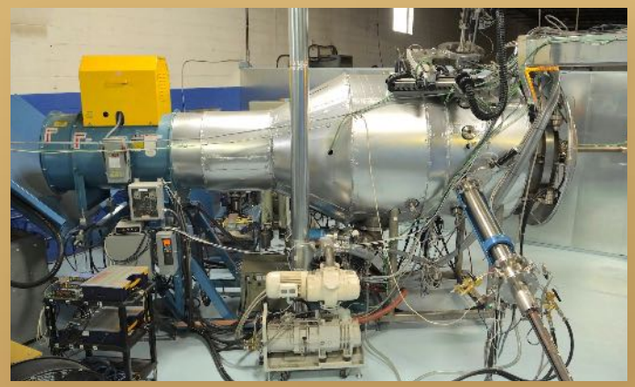
(see below)

PHASED DEPLOYMENTS OVER 6 YEARS

PHASE 01

REFINING PROCESS AND DESIGNING NEW REACTOR

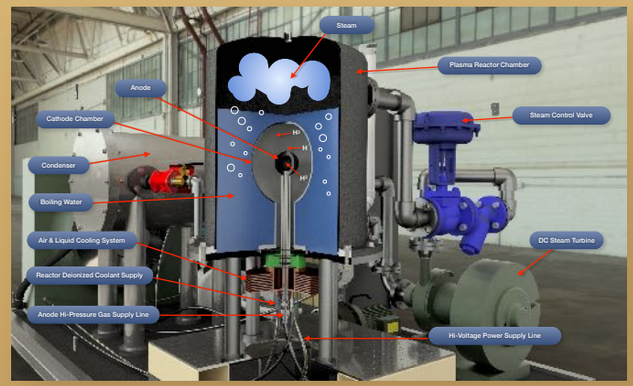
Aureon Energy will work with the existing SAFIRE reactor to characterize and maximize energy output, and document best methods for nuclear remediation. Aureon Energy will create commercial partnerships.



PHASE 02

BUILD NON-COMMERCIAL REACTOR PROTOTYPE

Aureon Energy will build a new reactor capable of handling the high-energy testing and technical refining required to produce a commercial prototype. Aureon will further expand and develop partnerships and licensees.



PHASE 03

MANUFACTURING OF FINAL COMMERCIAL PROTOTYPES

Aureon Energy will create the commercial Safire Reactor for energy production and remediation of larger volumes of nuclear industry byproducts, and build out the partnerships to include manufacturing and distribution

ENERGY & HEATING MARKETS

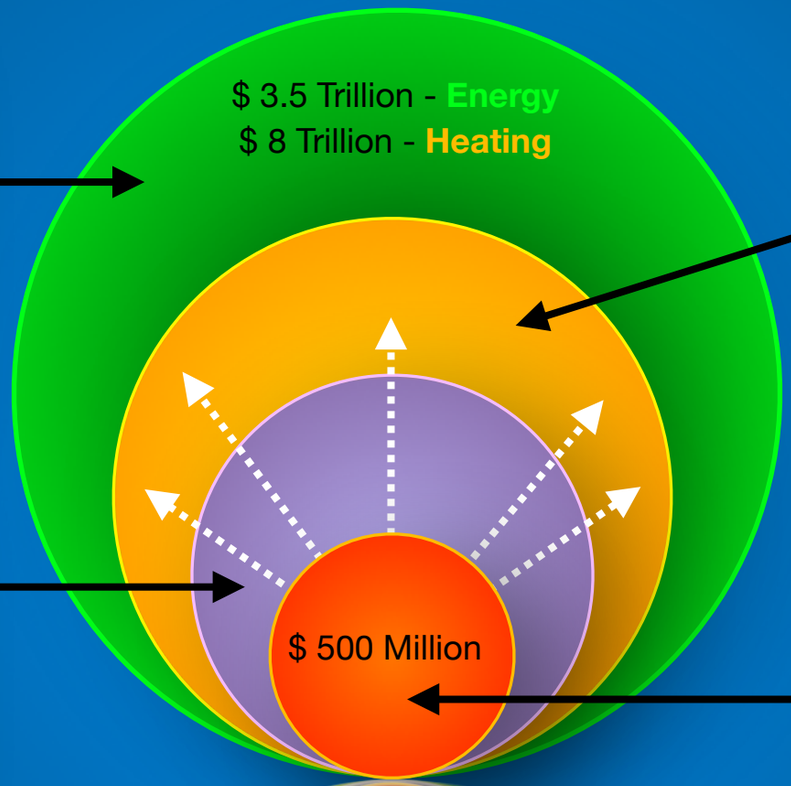
TOTAL ENERGY / HEATING MARKETS

Massive market size, expected to increase by 25% in 2023

Nuclear, Hydro Electric, Solar, Wind, New Technologies.

NEW ENERGY MARKETS - STATUS

New technologies: both low-energy *(LENR)* and high-energy *(ITER);* not yet producing stable release, or commercial prototypes.



DECENTRALIZED DISTRIBUTION

Migration to decentralized medium and small energy generation models: nuclear, solar, wind, hydro, new technologies.

AUREON ENERGY / SAFIRE

>$500 million expected by end of 2026, and steady rapid growth thereafter.

Clean energy production is the fastest growing market on the planet. In 2017 $200 Billion in the US and $1.2 Trillion globally was invested in renewable energy projects worldwide. The amount of renewable energies produced and used each year is growing exponentially.

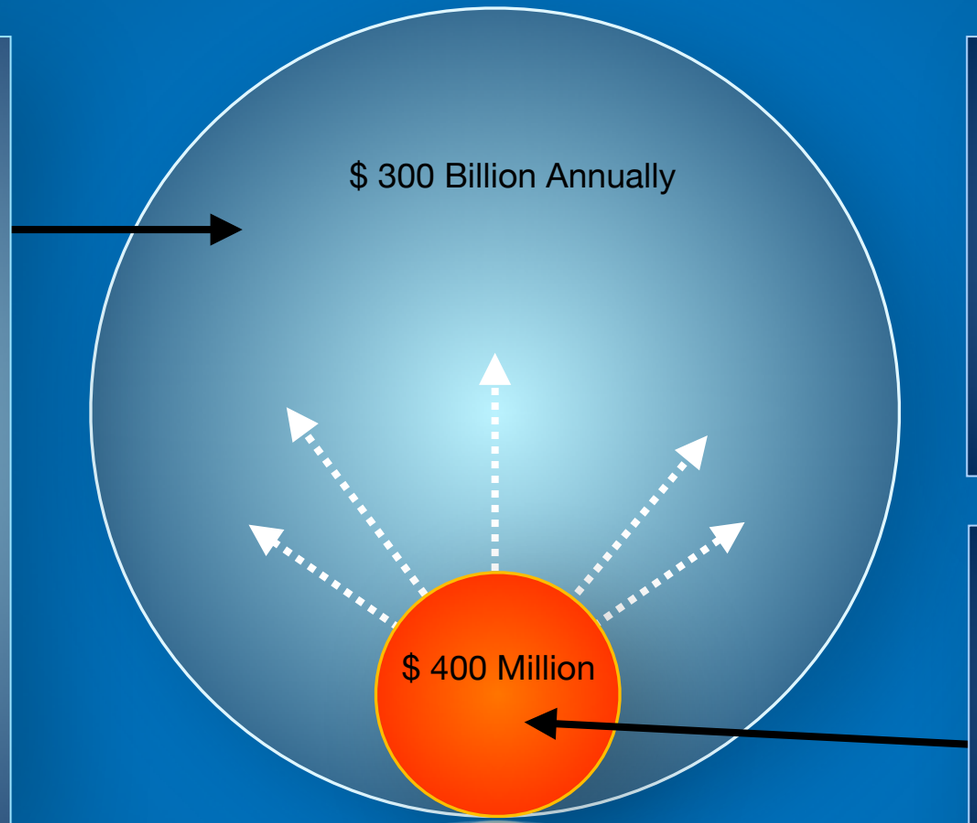
NUCLEAR REMEDIATION MARKET ~ CURRENT

NUCLEAR REMEDIATION

Currently all radioactive spent fuel is being stored at enormous expense in facilities or buried in the ground, constantly monitored and maintained.

The radiation half-life of nuclear waste can be measured in the thousands, even hundreds of thousands of years.

Radioactive spent fuel is what keeps the Nuclear Energy Industry from being the go-to technology for energy production.



A *transformational* technology, SAFIRE does not have to compete with existing businesses to be successful. In the instance of nuclear waste remediation the SAFIRE technology can be leased, sold to, or included in a partnership with current industry leaders in nuclear waste management.

AUREON ENERGY / SAFIRE:

The commercial SAFIRE REACTOR will be designed to remediate (neutralize) radioactive nuclear waste while simultaneously generating energy.

Another key market for the SAFIRE REACTOR is the nuclear energy industry. The approximate worldwide cost to remediate and store nuclear waste is currently $300 Billion annually.

SAFIRE REACTOR & NUCLEAR ENERGY INDUSTRY SPECTRUM

LOW ENERGY

LENR, Cold Fusion, and *all existing nuclear power plants* are **low** or **low-medium temperature** reactors. They require specially prepared solid fuels, which are expensive and often dangerously radioactive.

MEDIUM ENERGY

SAFIRE is a stable **medium-temperature** plasma reactor currently producing a controllable plasma discharge, which can be generated at will, and run continuously over extended periods of time.

HIGH ENERGY

ITER or Tokamak systems are **high-temperature** reactors. So far, they are inherently unstable and are not yet producing electricity.

Intellectual Property STRATEGY

PATENTS

2 Patents Granted
8 Pending
2 Processing

INTELLECTUAL PROPERTY

Formula of Materials
Process

TITLE	COUNTRY	SERIAL No.	FILING DATE	PATENT No.
ELECTRODE ASSEMBLY FOR PLASMA GENERATION	United States	62/547,432	08/18/2017	Pending
ION GENERATOR APPARATUS	United States.	62/547,455	08/18/2017	Pending
PLASMA HEATING APPARATUS, SYSTEM AND METHOD	United States	15/904,261	02/23/2018	Pending
ION GENERATOR APPARATUS	United States	16/105,365	08/20/2018	10,398,015
ION GENERATOR APPARATUS	Canada	3,014,940	08/20/2018	Pending
ELECTRODE ASSEMBLY FOR PLASMA GENERATION	United States.	16/105,190	08/20/2018	Pending
ELECTRODE ASSEMBLY FOR PLASMA GENERATION	Canada	3,014,970	08/20/2018	Pending
MANIPULATOR FOR MOVEMENT OF ARTICLES IN A CONTROLLED ENVIRONMENT CHAMBER	United States	62/181,006	06/17/2015	Pending
MANIPULATOR FOR MOVEMENT OF ARTICLES IN A CONTROLLED ENVIRONMENT CHAMBER	Canada	2,933,317	06/16/2016	Pending
MANIPULATOR FOR MOVEMENT OF ARTICLES IN A CONTROLLED ENVIRONMENT CHAMBER	United States	15/185,810	06/17/2016	10,040,190

PHASE I

EXPECTED COMPLETION ~ MID 2021

$100 MILLION PRE-MONEY VALUATION
LOOKING FOR STRATEGIC INVESTORS
MARKETING – FILMS, ARTICLES, WEBSITE

MILESTONES TO ACHIEVE

- Energy Optimization - Thermodynamics
- Quantifying Energy Efficiency (COP)
- Quantifying Low Level Nuclear Remediation
- Identification of Industry Partners
- CNL, CERN, US DoE
- Application to Government Programs

PHASE II

EXPECTED COMPLETION ~ MID 2023

FIRST OPTION TO PHASE 1 INVESTOR
MANUFACTURING / DISTRIBUTION PARTNERS
MARKETING – FILMS, ARTICLES, PAPERS

MILESTONES TO ACHIEVE

- Build Development Test Reactor
- Move into a New Facility
- FINAL Thermal Efficiency Report

PHASE III

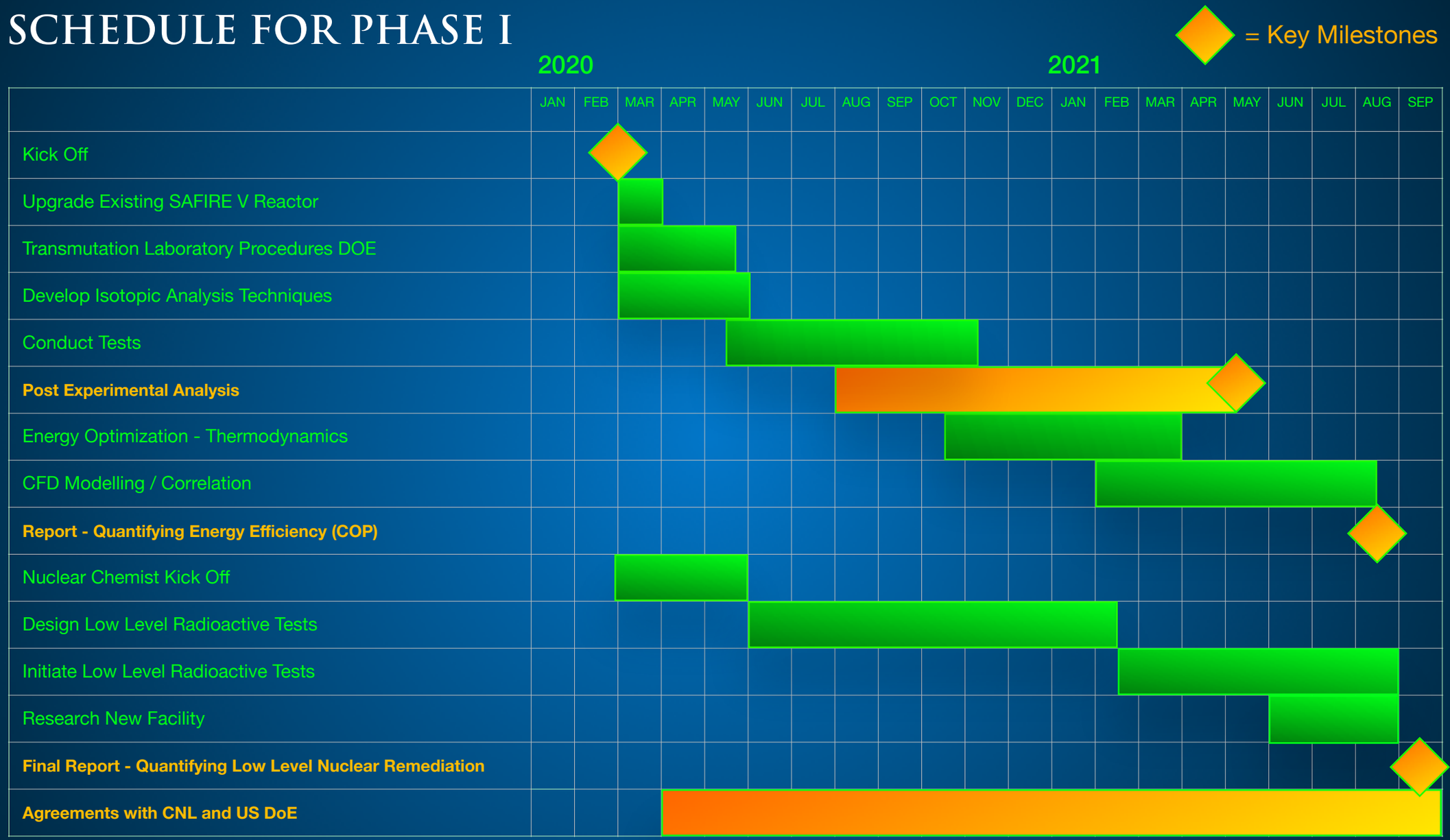
EXPECTED COMPLETION ~ MID 2025

MANUFACTURING PARTNER CONTRACTS
DISTRIBUTION PARTNER CONTRACTS
MARKETING – FILMS, ARTICLES, PAPERS

MILESTONES TO ACHIEVE

- SAFIRE REACTOR Prototype Completed
- Low Level Remediation Testing Complete
- Partners - global commercial planning

SCHEDULE FOR PHASE I



REVENUE / EXPENSES

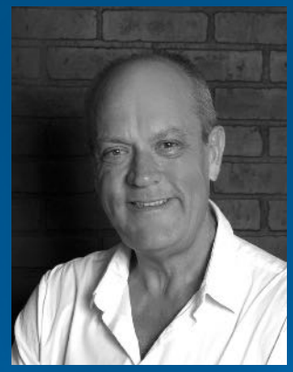
Start-Up net revenue expected to convert to positive in approximately 2026

$ USD	PHASE 1 2020-2021	PHASE 2 2021-2023	PHASE 3 2023-2025
TOTAL REVENUE (start with nuclear remediation clients)	$0	$1,500,000	$3,000,000*
Human Resources (incl. Legal/Acc)	$3,250,000	$4,800,000	$4,050,000
Reactor Expenses	$505,000	$2,244,000	$1,628,000
Overhead	$1,090,500	$1,709,000	$1,210,500
TOTAL EXPENSES	**$4,845,500**	**$10,253,000**	**$6,888,500**

*The expectation is that Aureon will generate hundreds of millions in revenue from licensing and sales of energy units towards the end of this decade.

SAFIRE TEAM EXECUTIVE

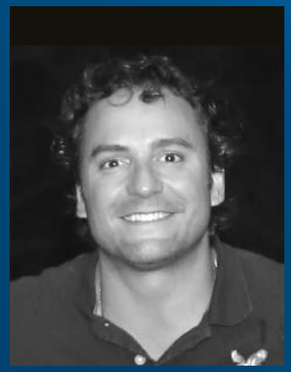
MONTGOMERY CHILDS
Founder & President



JONATHAN MCMAHON
Chief Executive Officer

DR. MICHAEL CLARAGE
Chief Science Officer

DR. PAUL ANDERSON
Chief Technical Officer



DENNIS REICH
Business Development

TRACEY CHILDS
Financial & Legal

BEN GED LOW
Film Production,
Corporate Image

SAFIRE TEAM & CONSULTING TEAM

BEN GED LOW | JASON LICKVER | JANO ANDERCO | SCOTT MAINWARING | GEORGE HATHAWAY | LEIGHTON MACMILLAN | HAL PUTOFF | MICHAEL CLARAGE | WAL THORNHILL | MONTGOMERY CHILDS | JAMES RYDER | PAUL ANDERSON

not present
JONATHAN MCMAHON
DR. DONALD SCOTT
ERIC DAVIS
WILLIAM GARDNER

THE SAFIRE PROJECT

Contact:

Jonathan McMahon / Montgomery Childs

jmcmahon@aureon.ca
T: 502-264-1583

mchilds@aureon.ca
T: 705-717-9543

AUREON ENERGY