

UNSOLICITED PROPOSAL COVER SHEET

Proposal Receipt Date: _____ USP # _____
(internal use)

DUNS No.: _____ DOE Amount Requested: \$ 287,000,000

Taxpayer Identification No.: _____ Proposed Cost Share \$ N/A

Congressional District No.: US TX District 3rd Total Project Value \$ 4,350,000,000

Organization Name: Servergy, Inc.

Doing Business As (DBA), if applicable: N/A

Division: Department of Energy

Street Address: _____

City/State/Zip + 4: _____

Email Address: _____

Business Contact/Phone/FAX/Email: Bill Mapp Phone: _____
Email: _____

Principal Investigator/Phone/FAX/Email: Bill Mapp Phone: _____
Email: _____

Major Team Member/Subcontractor (if applicable): N/A

Proposal Title: *Sustainable New Green Data Center Server, Storage and Networking Products Using Patented Cleantech Architecture™ To Accelerate Input/Output (I/O) Up To 16X or More - Plus Reduce The Energy, Cooling, Space, Weight, Water and Carbon Footprints By Up To 90% or More.*

Proposed Project Duration months 24 months Proposal Valid through September 2014
(6 months is recommended)

Organization Type 8	Support Type 1	Socio-Economics Type 2
1-Educational	1-Development	1-Disadvantaged Business
2-Foreign	2-Institutional Support	2-Small Business
3-Government	3 -Interdisciplinary	3-Women Owned
4-Hospital	4-Research	
5-Indian	5-Training	
6-Individual	6-Other	
7-Non-Profit		
8-Profit		

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and lower costs. Servergy's brand tagline sums Servergy's ongoing commitment to help create a more sustainable, green and clean triple bottom line economy, society and planet by helping companies everywhere - "Save Energy. Work Smarter.™"

1.2 Point of Contact

Name: Bill Mapp

Title: Chairman and CEO, Founder

Phone: [REDACTED]

Email: [REDACTED]

1.3 Corporate History

Servergy, Inc. is a 2009 Silicon Valley startup that was recently listed as #4 on the EE Times "Global Top 10 List of Most Disruptive Start-up Companies for 2013." (EE Times is one of the most widely circulated and respected industry publications in the world.) Servergy was formed as a Nevada C Corporation that relocated its headquarters and Innovations Lab to North Dallas, Texas at the end of 2010. To date the Company has raised in excess of \$25 million of equity capital and invested over \$12 million into its current server technology platform. The Company currently has around 30+ suppliers, 3 top Tier-1 global manufacturers, the top global distributors, a rapidly growing partner list of top global companies, the top IP law firm, the top IT research and advisory firm; and employs around 35+ people. The company has no outside loans or funded debt.

The Servergy, Inc. proven executive leadership team brings a Fortune 500 and entrepreneurial track record of innovation and success in consistently driving award-winning new technologies, products, and services that achieve record sales, profits, and customer satisfaction. This will enable Servergy, Inc. to accelerate its business velocity, brand equity and shareholder value, globally, while helping create a more vibrant and sustainable economy, society and planet.

What others are saying about Servergy...

EE Times

Servergy Makes #4 Spot of Global Top 10 List of Most Disruptive Technology Start-up Plays

CRN

Servergy listed in Top Data Center Stories for 2013

Gartner Research

Servergy on the Top Watch List of "Revolutionary Disruptors" for the Coming "Datacentre Storm"

451 Research

"Servergy Bucks the Trend..."

1.4 Recipient Agency Information

We are submitting this unsolicited proposal to:



U.S. Department of Energy
National Energy Technology Laboratory
626 Cochran's Mill Road
P.O. Box 10940
Pittsburgh, PA 15236-0940

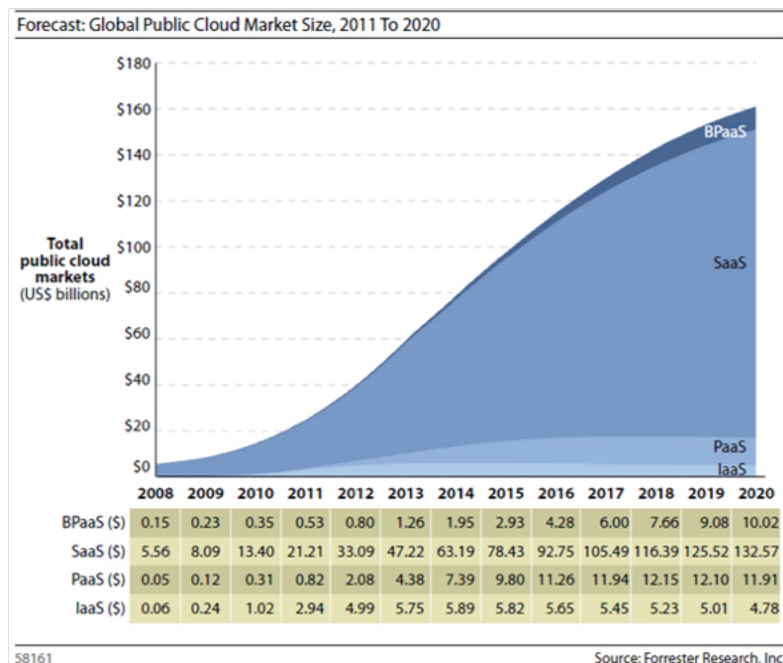
1.5 Previous Proposal Distribution

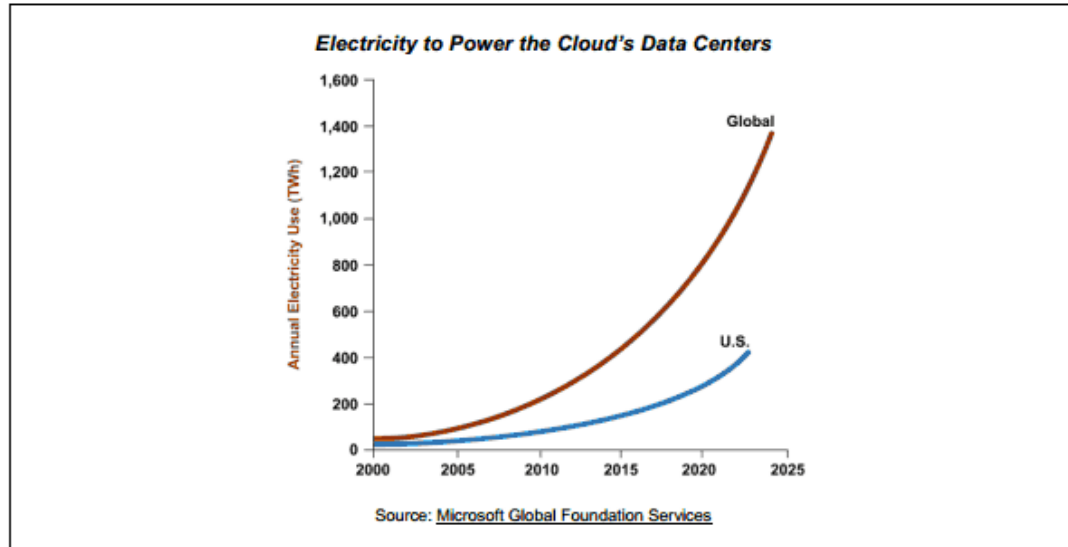
This proposal has not been received by any other federal, state, or city government institution for consideration.

2.0 Technical Information

2.1 Proposal Abstract

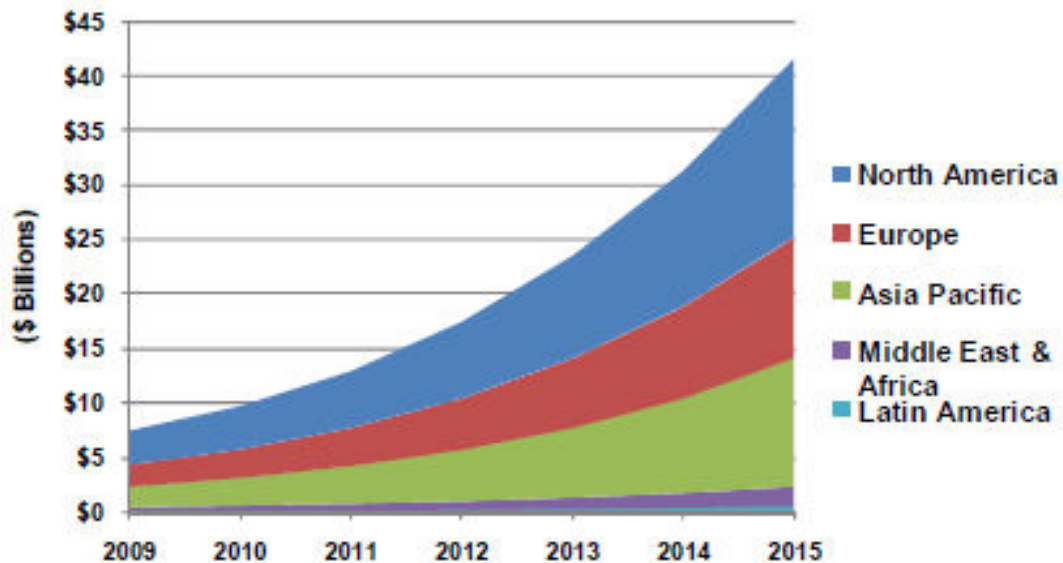
In 2012, there were estimated to be over 509,000 data centers globally powered by over 44 million servers according to Emerson. According to IDC Research, by 2015 there will be 2 billion more people online, 75X more data center traffic, as well as 10X more servers required than today, just based on "Big Data" estimates alone. In other words, there will need to be 440 million servers available to meet data demands of current population and data center growth projections. See growth and energy projections in graphs below just for the public cloud alone, not including all the Global 2000 companies' private cloud data centers worldwide.





This rapidly increasing demand is creating a significant strain on electricity capacity and driving the need for more efficient information technology solutions. The Department of Energy has estimated that the energy impact of data centers is responsible for 2% of global carbon emissions and growing; as well as the use 80 million megawatt-hours of energy annually, almost 1.5 times the amount of electricity used by the whole of New York City. With projections like this, we can expect the global consumption of servers to increase well over the 10X projected by IDC Research, unless new technologies (e.g., like Servergy has) can be created that dramatically reduce the consumption of energy, while also accelerating the input/output (I/O) of big data, globally.

Green Data Center Revenue by Region, World Markets: 2009-2015

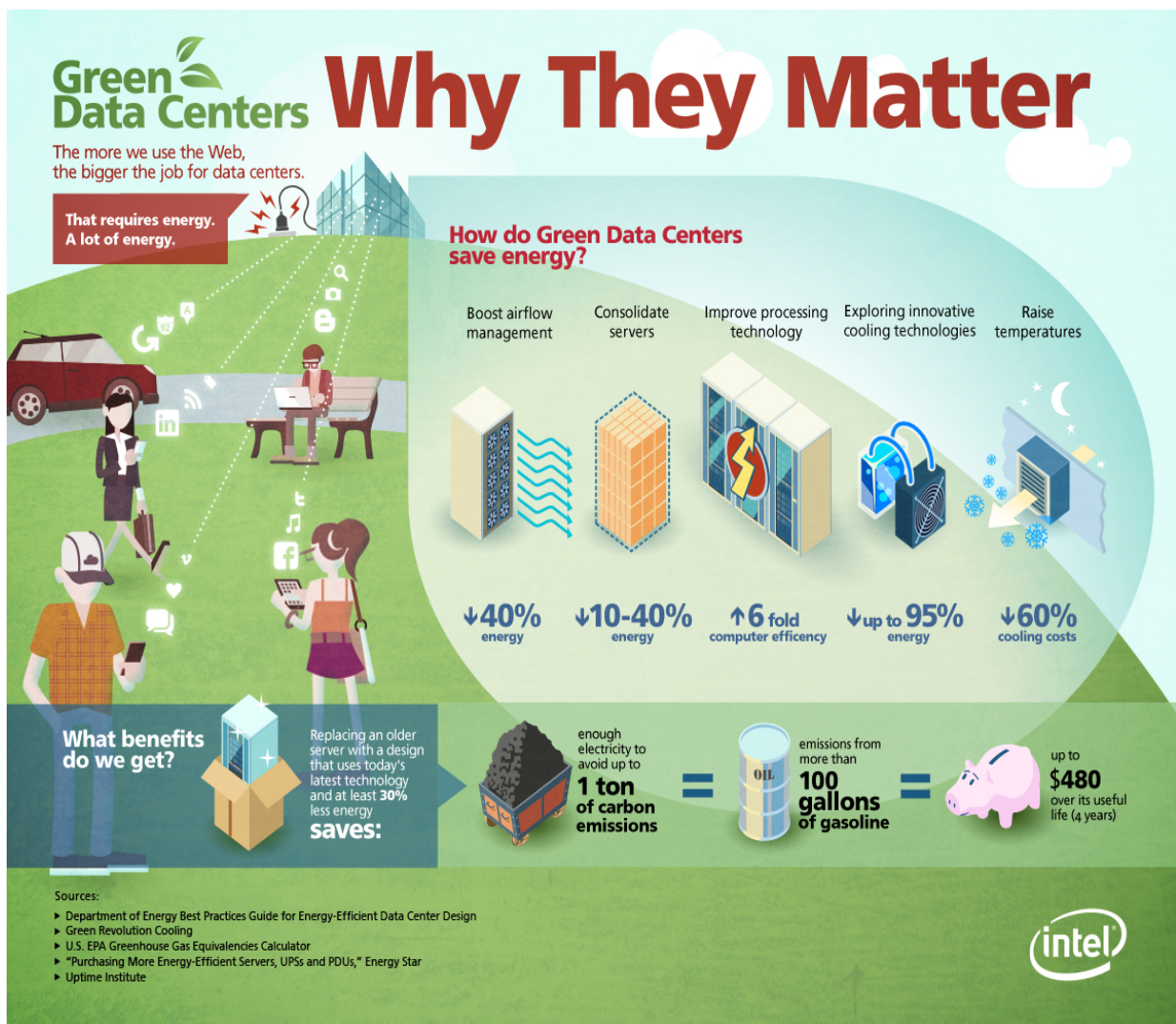


(Source: Pike Research)

Servergy, Inc. is requesting a grant of \$287,000,000 from the DOE to develop a whole new class of clean and green data center IT server, storage and networking products, built using Servergy's patented Cleantech Architecture™. This request is in addition to its current server product, that will further offset the projected increase in U.S. and global server based demand for electricity by reducing per unit server electrical consumption by up to 90% or more and generate industry leading performance-per-watt, OpEx, payback and ROI.

Servergy's new class of Cleantech Server®, built using Servergy's patented Cleantech Architecture™ can also have significant impact on lowering cooling, space, weight, water and carbon footprints for data centers everywhere. You can see the dramatic impact this would have for data centers globally, with potential savings in the billions of dollars. This is easily illustrated in the infographic below that shows the dramatic savings that occur for replacing older servers in the data center that increase energy-efficiency by just 30% more energy-efficient - not the up to 90% or more achieved by Servergy's new Cleantech Servers® - built using Servergy's patented Cleantech Architecture™ technology and process. (NOTE: This is the same technology and process approach that Servergy wants to use to develop the seven new clean/green data center IT products, using the funds being requested in this grant proposal.)

IMPACT FROM REPLACING SERVERS THAT SAVE ONLY 30% IN ENERGY USAGE

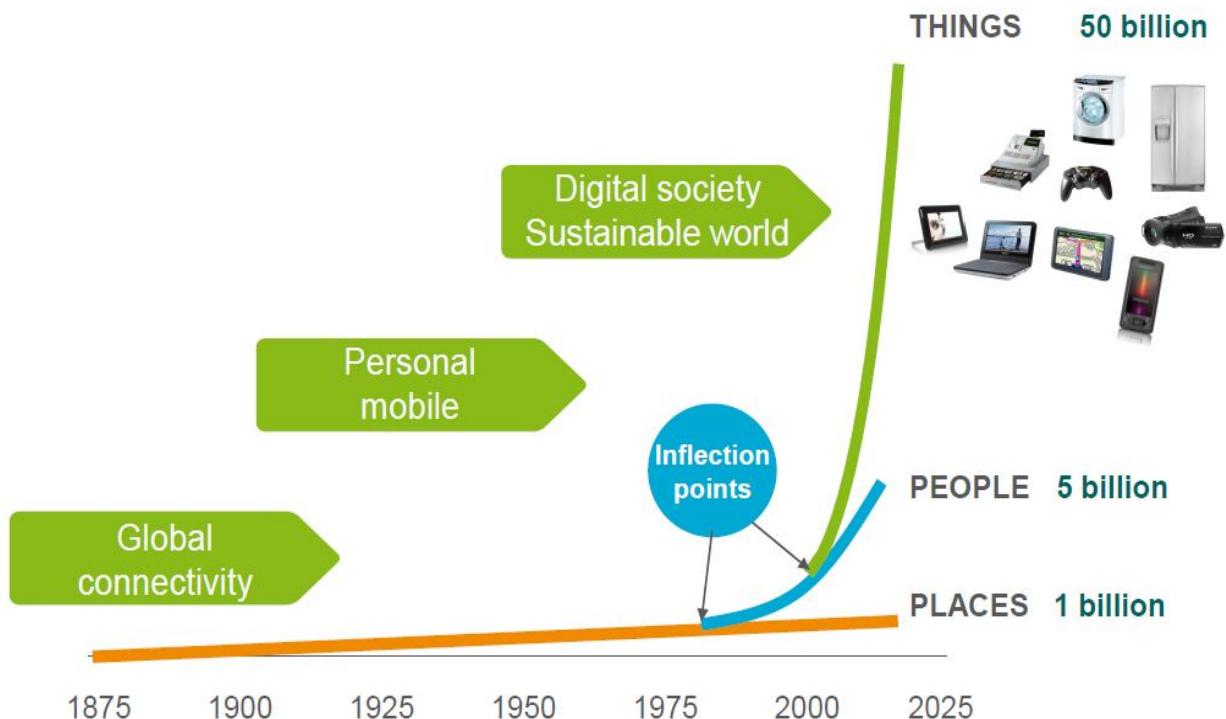


coffee was a gigabyte, a zettabyte would be the volume of the Great Wall of China) which requires the construction increasingly massive data centers whose voracious appetite for power currently consumes 3 percent of U.S. electricity. At the same time, data centers enable the usage of personal devices that comprise 15 percent of home electricity use - a figure projected to triple (300%) by 2030, equivalent to the demand of the American and Japanese home markets combined. These staggering trends suggest that unless more energy efficient data center technology alternatives (e.g., Servergy's Cleantech Architecture™), the United States will trend to even higher energy consumption rates driving up costs to consumers and businesses alike.

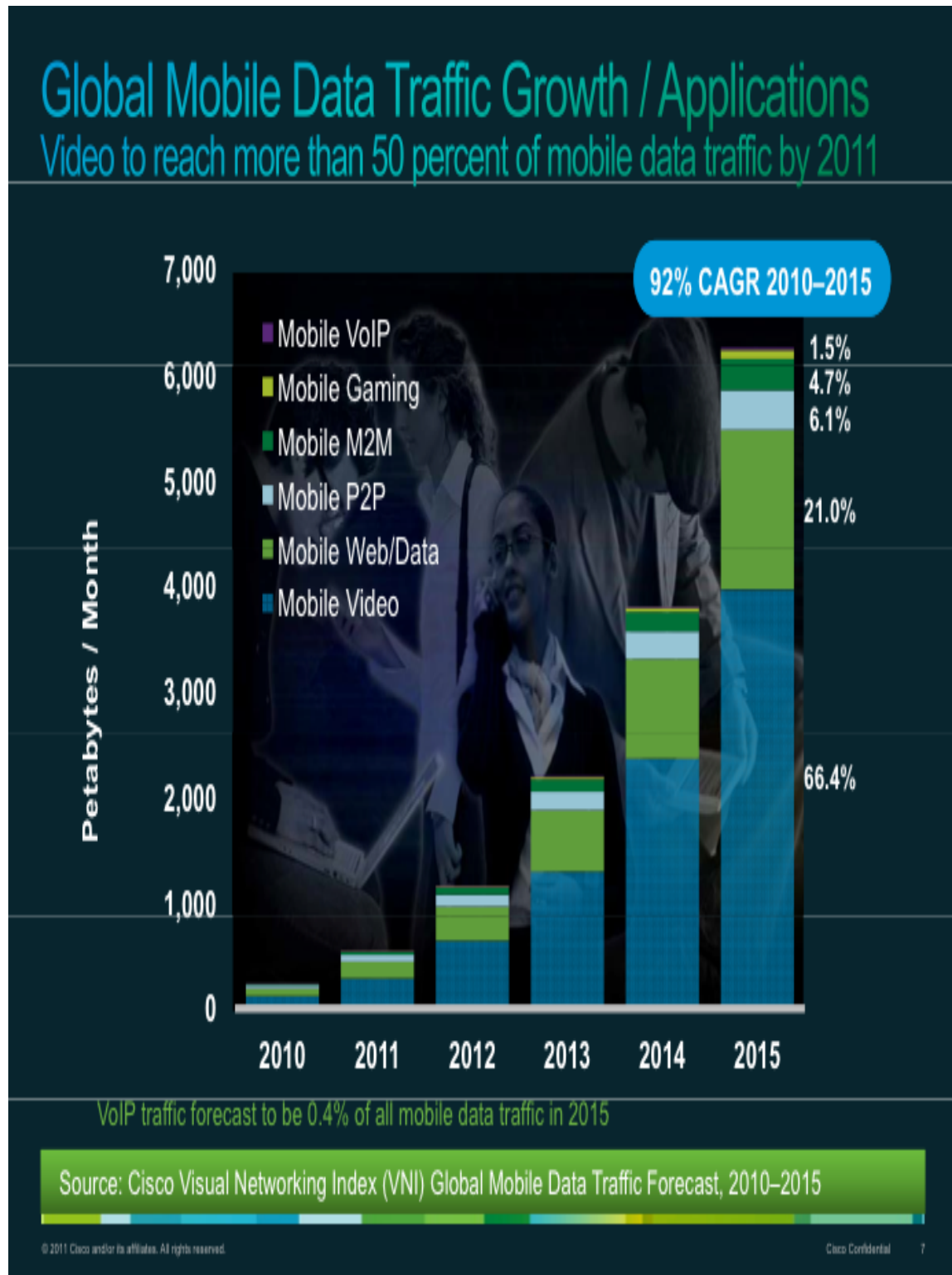
SECOND, funding of our proposal will result in the creation of many new American technology sector jobs from a research and development as well as manufacturing perspective. Should the proposal be accepted, Servergy, Inc. estimates that up to an additional 475 full time information technology jobs will be created in the United States to meet the needs of our final development schedule over the next 60 months. Given recent trends with US technology jobs being outsourced abroad, it is important to note that our job creation is projected to be in the US and would support US families and communities.

THIRD, our patented servers take up significantly smaller amounts of energy and space than do competitor servers. Recent studies project that data center growth will continue to experience rapid growth to meet the growing population and insatiable Internet usage demands from global mobile, video for people and *Smart Planet* "Internet of Things" embedded applications – see graphs below.

ERICSSON PROJECTIONS OF INTERNET OF PEOPLE+THINGS CONNECTED TO DATA CENTERS



EXPLODING DATA FROM MOBILE TRAFFIC DRIVING GLOBAL DATA CENTER GROWTH



Fortunately, with Servergy's patented Cleantech Architecture™, we were able to develop the new Cleantech Server® class of servers with the footprint about the size of a legal pad that weigh only 9 pounds, while increasing data I/O by up to 16X or more; all while at the same time running on around just 100 watts of energy at full load. We are wanting to do the same thing with other IT products for the data center, with our top global partners, using our patented Cleantech Architecture™ - that is the request, hope and intent of this grant proposal.



The new **clean** and **green** Cleantech Server®



Extremely high I/O.
Saves up to 90%+ on power and space.

- ⏻ Saves Space
- ⏻ Hyper Efficient
- ⏻ Highly Scalable
- ⏻ Data I/O Accelerator
- ⏻ Pays For Itself
- ⏻ Proven Architecture

 **Servergy®** | Save Energy. Work Smarter.

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2.2 Contract Type

The Board of Directors of Servergy, Inc. requests that Servergy, Inc. be awarded a grant of \$287,000,000 to develop the following systems using the patented Cleantech Architecture™:

1) Cleantech Distributed Storage System™; 2) Cleantech SDN™ (Software Defined Network) Solution; 3) Cleantech P8 SOC™ (System-on-a-Chip) with IBM; 4) 64-bit Cleantech Server® Using New IBM P8 Chip, with IBM; 5) 64-bit Cleantech Server® Using Intel Chip, with Intel; 6) 64-bit Cleantech Server® Using ARM chip, with ARM; and 7) 64-bit Cleantech Server® Using Freescale Power Chip.

These 7 landmark products will help dramatically reduce power, cooling, water, space weight and carbon footprints for the information technology industry up to 90% or more, while

NOTE: Use or disclosure of data contained in this proposal subject to restriction on the title page of this proposal. Page 10
 Proprietary and Confidential.

increasing the I/O and compute density by up to 16X or more, over traditional systems in Data Centers today.

2.3 Project Method

Technology and Products

Introducing a New Class of Hyper-Efficient Enterprise Server



Servergy Cleantech Server® CTS-1000 Specifications Sheet

Max Power Used	< 120 Watts (The Industry's Top Performance-Per-Watt <i>PowerLinux</i> Server!)
Power Savings	Save up to 90% or more in server energy costs over traditional systems
Form Factor	1/4 of 1U (Footprint Size of a Legal Pad) 1.75" H X 8.25" W X 15.25" L
Space Savings	Increase Server Density 200 - 400% per 1U Bay; and 400 - 800% per 2U Bay
Weight	Under 9 Pounds
Processor	8 core 1.5Ghz Power Architecture® Processor
CPU Cache	L1 = 512 KB, L2 = 1 MB, L3 = 2 MB
Memory	32 GB DDR3/1333 Registered ECC w/Parity
DIMM Slots	4 x 240 Pin JEDEC
PCI Express	PCIe Gen 2, x4
Storage / RAID	LSI MegaRAID 6GB/s SATA+SAS RAID MegaRAID SAS 9280-4i4e: 4 Internal & 4 external MegaRAID SAS 9280-8e: 8 ports external
Hardware Offload & Acceleration Encryption / Security Networking Pattern Matching	SHA, RSA, AES, AFH, CRC, DES, KFH, STH, MDH, PKH, RNG Freescale DPAA RegEx Pattern Matching (PME 2.0)
HD Bays / Supported HDD	4 Bays / 2.5" SATA (HDD or SSD)
4 Ethernet Ports	2x 10GbE and 2x 1GbE
Power Supply	>90+%, Efficient Long Life 90-240V AC (DC Optional)
Rack Support	Quick Install Trays with Cable Management Standard
Ultra-Low Heat Output	<410 BTU/hr
Fans	Long-life, High-efficiency Fans with Variable Auto-speed Control
Operating Systems	SUSE, Red Hat, Fedora, Ubuntu, Others
Virtualization	KVM, Others Coming Soon...
No Expensive Blade Backplane Required	Improves <i>reliability</i> by Eliminating Backplane Single-Point-of-Failure
Standard Warranty	3-Year Warranty



Contact us at sales@servergy.com

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The Servergy, Inc. Cleantech Server® was built from the ground up using the patented Cleantech Architecture™ to replace the hot, heavy and power-hungry servers currently in the marketplace. The current all-new design uses a mature, scalable and data center proven architecture to deliver great performance at ultra-low power consumption. Scalable and powerful, Servergy, Inc. servers lower electricity costs for data processing and cooling, decrease the amount of space needed to house servers and decrease a data center's water and carbon footprints – dramatically lowering OpEx, Total Cost of Acquisition (TCA), and Total Cost of Ownership (TCO), literally helping pay for themselves. The primary benefits include:

Uses up to 90% or Less Electricity -- This is not “green washing”; these are real savings that will come on top of efficiencies gained by virtualization and server consolidation. Instead of doing less with less, do more work for less energy. The Servergy Cleantech Server® is engineered from the ground up to be both powerful and energy efficient. Additional discussion on the energy efficiency can be found in 4.1 Comparison of Savings.

Up to 16X or More Increase in I/O and Server Density -- The Servergy Cleantech Server® was designed with enterprise and data centers in mind every step of the way. With an extremely small form factor that allows for 2-4 servers in a 1U space (i.e., 1U equals 18” wide by 1.75” tall by around 36” deep), increasing server density by up to 8X for a 2U space, or 16X for a 4U space, that maximizing Total Cost of Ownership (TCO) and ROI over conventional servers by dramatically lowering servers power consumption, cooling, space, water and carbon.

Runs Cooler and Quieter -- Servergy, Inc.'s Cleantech Architecture™ allows Cleantech Servers ® to also run much cooler and quieter, which can also help them last much longer.

Standard 3 Year Warranty -- Servergy Cleantech Servers ® come with a standard 3 Year Warranty. Lower heat also means much less heat related degradation and failure. Uses top global manufacturers highest quality manufacturing processes available.

Pays for Themselves -- Servergy Cleantech Servers ® use only around 100 watts compared to up to 5X or higher wattage average of traditional data center servers. This dramatically lowers total cost of ownership (TCO), while increasing Payback and ROI - without compromising performance-per-watt. The savings on server power consumption, space, and cooling costs, as well as up to 16X or more I/O and compute density, put dollars right back on the bottom line. For every \$1 spent, you get up to \$5 or more savings back in 3 years or less.

Cleantech IT R&D Products Development

Servergy is a Cleantech IT Innovations Lab/Products Development company. Spending on product research and development (“R & D”) provides mission critical support for continued growth for the Company's new product pipeline, IP, sales and valuation. Servergy is committed to sustain healthy R & D budgets as an ongoing investment in the future to remain competitive and continue aggressively driving innovation and growth for both the company and the U.S.

other clean technologies such as Solar, that have received billions in U.S. Government subsidies, Servergy, Inc.'s Cleantech Architecture™ does not require government subsidies to be viable. The very instant that Cleantech Servers® are installed and turned on they literally start helping pay for themselves.)

More and more businesses and consumers are embracing sustainability to help preserve our planet and the life around us; and making green choices part of a lifestyle change in the way they live and work. Servergy, Inc. servers can be classified as both eco-friendly (i.e., greentech) and energy-efficient (i.e., cleantech) to help balance the 3Ps of People, Profits and Planet.



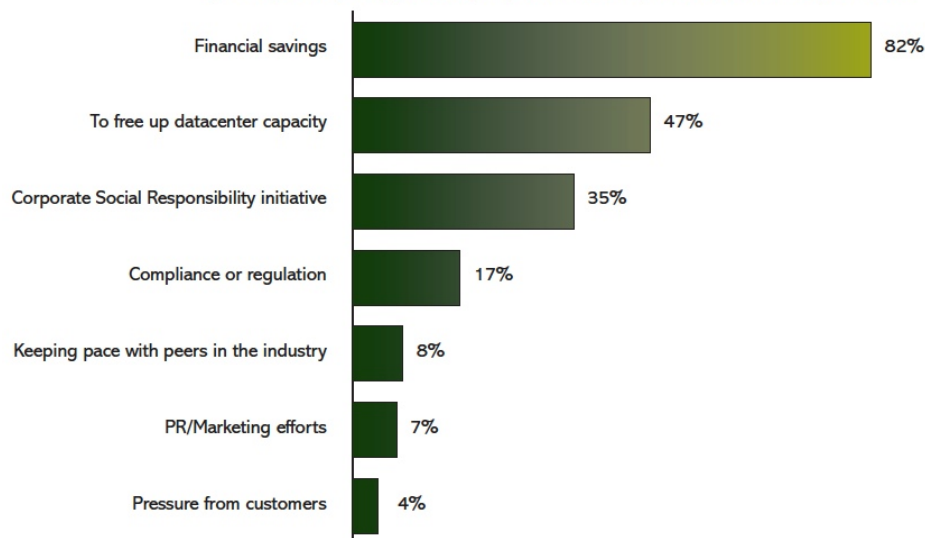
Below are just a few of the compelling facts that businesses around the world are realizing are the benefits of having a green/clean bottom line:

- Perceptions of environmental, ethical, and social stewardship are the fastest growing contributors to consumer brand value
- 30% of American consumers are willing to pay up to a 20% premium on clean, green products over non-sustainable alternative... and that number grows each year (Key research by Greenbiz.com has show that sustainable activist consumers are not "tree huggers", but young, upwardly mobile, affluent "brand huggers".)

Servergy, Inc. believes that improving the environmental performance of our business starts with developing eco-friendly products that not only help save our planet, but also save our customers money, by helping pay for themselves – first and foremost.

FIGURE 1: ENERGY-EFFICIENCY DRIVERS

If you are pursuing energy efficiency in your datacenter operations, select the top 2 drivers



Source: Uptime Institute 2012 Data Center Industry Survey

Additionally, the careful environmental management of our products throughout their life cycles includes controlling the quantity and the type of materials used in their manufacture, improving their energy efficiency, and designing them for better recyclability. The Servergy, Inc. manufacturing goal is to be designed with green features that can be demonstrated as viable, such as the following, to reduce environmental impact:

- High-efficiency power supply;
- Brominated flame retardant (BFR)-free;
- All internal cables free of polyvinyl chloride (PVC); and,
- Highly recyclable aluminum and stainless steel enclosure.
- Servergy's one-of-a-kind Uni-Bezel [™] all recyclable aluminum design with no plastics or paint – another industry sustainable first by Servergy...

Conserving material use and efficiency, through our proprietary efficient design, Servergy will also be creating a product with fewer overall parts. The Servergy green Cleantech Server [®] will not only be easier for recyclers to disassemble, but they are also being increasingly designed in a way to minimize the use of plastic and maximize highly recyclable aluminum and stainless steel.

Additionally, Servergy, Inc. will be working towards restricting the use of harmful substances in connection with its products and packaging. Servergy, Inc.'s goal will be to comply with the strict European Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, also known as the RoHS Directive. Examples of materials restricted by RoHS include lead, mercury, cadmium, hexavalent chromium, and PBB and PBDE brominated flame retardants (BFRs).

Through ultra-efficient design and use of highly recyclable materials, Servergy, Inc. plans to work towards minimizing material waste at the product's end of life. Servergy, Inc. will be



looking to offer and participate in product recycling programs wherever Servergy, Inc. products are sold. All products processed for recycling will be done in the country or region in when they are collected.

Servergy, Inc. is committed to be a thought leader in the green/clean IT space and pursue opportunities to secure green certifications, market recognition, press coverage and awards for its industry leading efforts to reduce the environmental impacts of our green/clean products; e.g., such as becoming ENERGY STAR ® certified, <http://www.energystar.gov/> and Epeat, which is required by many companies, as well as Federal Acquisition Regulation (FAR) 23.505 and E.O. 13423.

3.0 Submission Information

3.1 Agency Support Requirements

Servergy, Inc. is requesting funds of \$287,000,000 to create a series of six information technology breakthrough products based on it's patented Cleantech Architecture™ that accelerate data I/O by up to 16X or more, while at the same time reducing power, cooling, space, weight, water and carbon consumption by up to 90% or more; and thus provide significant, immediate and long-term benefits to the Department of Energy and America.

3.2 Benefits of Proposal

Servergy, Inc. offers the following immediate benefits to the Department of Energy:

- **Saves Energy, Water, Co2:** New Cleantech Architecture™ reduces power, cooling, space, weight, water and carbon footprints by up to 90% or more
- **Saves Space:** Up to 16X or more compute density vs. traditional server technology
- **Accelerates I/O:** Up to 16X or more in data I/O acceleration
- **Highly Scalable:** Cloud, Big Data, Caching, Distributed Storage, Streaming, Networking and Embedded solutions
- **Proven Architecture:** Based on mature, scalable and data center proven Architecture
- **Pays For Itself:** For every \$1 spent returns up to \$5 savings back in 3 years or less

 SUSTAINABLE

 POWER

 COOLING

 SPACE

 WEIGHT

 WATER

 CARBON

 Saves Space

 Hyper Efficient

 Highly Scalable

 Data I/O Accelerator

 Pays For Itself

 Proven Architecture

 **Servergy®** | Save Energy. Work Smarter.

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3.3 Proposal Timeframe

This proposal is valid for up to 6 months from the date that it is received by the United States Department of Energy.

3.4 Signature Page

UNSOLICITED PROPOSAL CERTIFICATION

I certify, to the best of my knowledge and belief, that our organization developed the methods and approaches stated in the proposal, and prepared this proposal without Government supervision, endorsement, direction, or direct Government involvement.

DATE: March 30, 2014

ORGANIZATION: SERVERGY, INC.

NAME: William E. Mapp III

TITLE: Chairman and CEO, Founder

SIGNED: 