

Task 1.3.3 Data Dissemination and Intellectual Property Plan

Introduction

The Utah FORGE team understands the need for transparency and data sharing in a timely manner. During the past 40 years, the Energy & Geoscience Institute (EGI), the prime contractor, has been at the forefront of the DOE program to collect, curate, and share geothermal data and samples. It currently houses one of the largest collections of geothermal drill samples and DOE-funded geothermal data in the world. Included in this collection is an extensive suite of data and samples from the Utah FORGE site dating back to the late 1970s. The data have been scanned and are accessible through the National Geothermal Data System (NGDS). Well samples available for study can also be found on the NGDS.

Additional data and samples from thermal areas in Utah are housed at the Utah Geological Survey (UGS). They have an extensive database of geochemical analyses and thermal data. Cuttings from the 3.8 km deep Acord-1 well, located close to the Utah FORGE deep well site, are stored at the UGS Utah Core Research Center Sample. Information on the geothermal data and samples available at the UGS has been uploaded to the NGDS.

The Managing PI of the Utah FORGE project, Dr. Joseph Moore, served as the Co-PI of the NGDS during its development. In this role, Dr. Moore helped develop content models, provided data for test cases, served as liaison between the NGDS PI and the geothermal community, and assessed the needs of the geothermal community. EGI hosted the first NGDS compatible node. The node has been continuously operational for last several years.

Data Dissemination

Data management for the Utah FORGE project will be under the supervision of Dr. Greg Nash. He will assist the Utah and R&D teams as necessary to upload data to sites specified by DOE, maintain a record of the uploaded data, and provide monthly and quarterly updates to the Project Management Team and the DOE. Dr. Nash will, in addition, work with the Communications Manager to assist the public in obtaining technical information on the project.

For Utah FORGE project Phases 1, 2A, and 2B, all data that is acquired will be uploaded to the Geothermal Data Repository (GDR). Dr. Nash will work with Utah FORGE investigators to ensure that the data is properly uploaded in a timely manner. For Phase 2C and beyond, our operating NGDS compatible node will be expanded to allow Utah FORGE data to be uploaded to the NGDS for public dissemination. This node will run on the NGDS Node-in-a-Box system. Non-proprietary data will be added to this system monthly, as it becomes available, and proprietary data will be added within a month of the owner granting permission to do so. This will facilitate public access with documentation (metadata) to guide data use. NGDS not only allows data access, but also direct visualization of GIS data using a number of GIS platforms, some of which can be accessed at no cost.

Although primary responsibility for data management will be under the supervision of Dr. Nash, it will be the responsibility of individual researchers to upload their completed datasets to a shared drop box that will be maintained by EGI or to give EGI access to their data in some other way such as a third party website. This data will then be reviewed and uploaded to the GDR or NGDS as appropriate. In Phase 3 Dr. Nash will work closely with the R&D performers to ensure they understand the requirements and formats for uploading data to the NGDS. Schedules for

uploading data for R&D projects will be reviewed with the R&D PI's and specified in their contracts.

For Phase 1 data and for future Phases, a private website has been setup (<http://utahdnr.maps.arcgis.com/home/>). This site is password protected and meant for sharing data and reports among the team members prior to making it public. This site facilitates data visualization as well as uploading/downloading. Proprietary data can be shared here. A second, public, website, <http://www.forgeutah.com/> has been created so that the public, DOE and other interested groups can follow activities on the Utah FORGE project. The website provides links to the DOE and contact information for the Project Management Team. It will provide a link to our NGDS FORGE site for data access.

Live data feed will be supported by the University of Utah Seismic Stations website (<http://www.seis.utah.edu/>) and the USGS Earthquake Hazards Program (<http://earthquake.usgs.gov/earthquakes/states/?region=Utah>). Additionally, the Utah FORGE team will work with contractors, such as mud-logging companies, who have either live data or virtually live data feeds to add these to the GDR or NGDS FORGE Node in real or near-real time. High priority datasets, not amenable to live data feed, will be added to the GDR or NGDS as soon as possible after receipt.

Intellectual Property Plan

EGI and the University of Utah have extensive experience in addressing Intellectual Property (IP) when it comes to Grants, Cooperative Agreements, and/or a combination of the two. It is recognized that if EGI's FORGE Phase II submission proposal is authorized, addressing Intellectual Property will be essential.

EGI and the University are fortunate to have an experienced and invaluable resource with the Office of Sponsored Research, and the Technology and Venture Commercialization (TVC) office. With \$400+ million/yr in research grants and sponsored research, we are positioned to excel at handling the various situations that may arise around IP during sub-award distribution. Furthermore, the University's tech transfer office, the Technology & Venture Commercialization office is one of the leading offices in the nation. Executing nearly a hundred license agreements and creating 15-18 startup per year, the TVC is no stranger to contracts, negotiations, partnerships, IP management, and conflict resolution with external stakeholders. The TVC's process to evaluating and protecting IP has been tested and solidified since the office's inception in 1970, and will contribute greatly as potentially new inventions are uncovered through this grant.

EGI and its affiliates here at the University will rely on, *DEAR 952.227-78 – Rights in Technical Data-Facility Provisions*, and, *Intellectual Property Provisions (GNP-115) as a non-profit institution of higher education*. Having extensive experience with similar grant opportunities, and considering the funds are governmental dollars which will flow down through EGI to subcontractors, the value of implementing protocol 927.402-1 - General, and, provision 52.227-14 Rights in Data – General, in the contracts is recognized. The IP provisions listed above encompass the right of the Federal awarding agency to a royalty-free, nonexclusive and irrevocable right to reproduce, publish, or otherwise use the work for Federal Purposes, and to authorize others to do so. In addition, any other FAR and DFAR clauses addressing IP from the Federal Grant will be followed and adhered to.

Under GNP-115, Section 37 DFR 401.14, section (b) “Allocation of Principal Rights” it is stated that “The *Contractor* may retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this clause and 35 U.S.C. 203”. The terms and conditions to potential subcontractors are already defined throughout these IP provisions and will be encouraged to be adopted by the University when negotiating with the potential subcontractors.

When circumstances arise that are not defined by the provisions listed above, the University in good faith will work to uncover the best resolution, and terms to resolve the gridlock in the agreements. Pre-negotiated License Agreements can be put into place if the subcontractor wants to protect their rights to technology if IP is generated. The University rarely assigns rights to IP generated from Federal Funding and will refrain from offering this option to collaborators.

If awarded, EGI will include in all other subcontracts, patent rights clause required by 2 CFR 910.362(c);

In circumstances where pre-existing intellectual property exists, EGI with the assistance of the TVC will negotiate and put in place an Inter-Institutional agreement (IIA) with the subcontractor. The IIA will specifically define what intellectual property is being brought in by which party. If the pre-existing Intellectual property is the foundation for the new R&D to be conducted, ownership will be defined in order to prevent any arguments around the material at a later point in time. In addition, the IIA will define that any future IP is jointly owned by the contractor and sub-contractor, while determining who will lead the filing, prosecution, and management responsibilities regarding new intellectual property which may arise. Both sides will be responsible for half of the costs associated with the protection of the intellectual property. Furthermore, the IIA will require that any pre-existing intellectual property be available to the other party in the form of a non-exclusive royalty free license in order to conduct academic research, and/or commercialization of any new intellectual property.

In order to share data and research materials, a Material Transfer Agreement will be negotiated and put into place with the subcontractor.

When new intellectual property is uncovered, EGI would recommend the TVC lead the efforts in preparing and filing any new inventions that deserve intellectual property protection. The TVC works closely with five select firms which would handle the preparation and filing of the application, in coordination with a Business Technology Development Manager from the TVC that would be assigned to the case. In addition, it would be preferred by the University to already propose and include a pre-defined license agreement in case intellectual property is generated. It is recognized that it is hard to determine all the right terms as every invention is different, and propose that if a future invention does arise, and the terms of the pre-set license agreement is not adequate, both parties shall renegotiate in good faith the terms, if justifiable.

INTER-INSTITUTIONAL AGREEMENT

Between

UNIVERSITY OF UTAH RESEARCH FOUNDATION

and

[INSTITUTION]

DRAFT

FOR DISCUSSION PURPOSES ONLY

The submission of this draft for review or its negotiation, or the negotiation of the transaction described herein does not constitute an offer and the execution of this agreement by [INSTITUTION] does not constitute a binding contract until such time as it has been executed by an authorized officer of the University of Utah Research Foundation.

This draft will expire on _____

INTER-INSTITUTIONAL AGREEMENT

THIS AGREEMENT, hereinafter "Agreement", effective as of the last date of signature below, is made by and between the UNIVERSITY OF UTAH RESEARCH FOUNDATION, having a place of business at 615 Arapeen Dr., Suite 310, Salt Lake City, Utah 84108 (hereinafter referred to as "Utah"), and ABC UNIVERSITY, having a place of business at

_____ (hereinafter referred to as "ABC").

1. RECITALS

Whereas, In the course of research programs at Utah and ABC, Jane Doe of University of Utah, and John Doe of ABC (collectively, Joint Inventors) created the Inventions; therefore, Inventions are jointly owned by Utah and ABC.

Whereas, Utah and ABC (hereinafter the Parties or Party) have separate agreements with Joint Inventors whereby they agree to assign all right, title and interest in the Inventions to their respective institutions, and whereby the Joint Inventors agree to assist their respective institutions in preparing, filing, prosecuting, defending, and maintaining patent applications and patents relating to the Inventions throughout the world.

Whereas, The Parties desire to jointly exploit the Inventions and the Patent Rights.

NOW, THEREFORE, in consideration of the mutual covenants and promises herein contained, the Parties agree as follows:

2. DEFINITIONS

2.1 **Inventions** means all discoveries, know-how, information, and inventions created by Joint Inventors entitled “ _____ ” referencing U- _____ and ABC # _____.

2.2 **License Revenue** means the transfer of value from third parties to Parties in consideration of granted licenses or other rights to the Inventions and/or Patent Rights which may include, but is not limited to: actual royalties, fees, payments, equity securities and other sums.

2.3 **Patent Expenses** means all out-of-pocket expenses incurred by either party, as evidenced by actual invoices that were incurred in searching, preparing, filing, prosecuting, defending, and maintaining patent(s) and patent application(s) to the Inventions.

2.4 **Patent Right(s)** means the Parties' respective rights in discoveries, know-how, information and inventions covered in patents and/or patent applications, as described in Exhibit “A”, whether domestic or foreign, which identify Joint Inventors as inventors and which relate to the Inventions, and any patent application(s) claiming the benefit of priority thereof including all divisions and continuations of these applications, all patents issuing from such applications, divisions and continuations (other than continuations-in-part, unless the claim or claims of the continuation-in-part is/are directed to subject matter specifically described in the patent(s) or patent application(s) listed in Exhibit “A”), and any reissues, reexaminations, and extensions of all such patents to the extent that Joint Inventors are named as inventors thereon.

2.5 **Fee** means the fee retained by Utah as consideration for securing and administering license agreement(s) and other activities associated with an extensive commercialization effort of the Invention as covered under the Patent Right(s).

3. PATENT PROSECUTION

3.1 Utah, in consultation with ABC, may retain counsel of its choosing to prepare and prosecute patent applications and enforce patents within the Patent Rights. Such Patent Rights shall be assigned jointly to Utah and ABC, each of which shall have an equal and undivided interest in the Patent Rights.

3.2 The filing, prosecution, maintenance and enforcement of any patent or patent application within the Patent Rights will be mutually agreed upon between Utah and ABC, and the Parties will share the out of pocket expenses thereof as per Article 5. If either Utah or ABC objects to the filing, continued prosecution of an application, enforcement or maintenance of a patent or patent application within the Patent Rights in a particular country that Party shall provide the other Party with Sixty (60) Days notice of intention. The declining Party, after providing notice of its intentions, will proceed to meet all obligations, financial or otherwise, to the other Party by the end of the Sixty (60) Day period. If the remaining Party subsequently licenses the declined patent or patent application and receives royalty or other income thereunder, the Party having declined the patent or patent application shall be entitled to recover any unreimbursed patent expenses, as provided in Article 5, incurred from prosecuting the declined patent or patent application, but only after the remaining Party has recovered its expenses in full. After such out of pocket patent expenses of the declining Party have been reimbursed in full, that Party shall no longer be entitled to any royalties, as provided in Article _____, for that patent or patent application. Distributions shall be made quarterly or as otherwise agreed in writing by the Parties.

4. LICENSING

Utah and ABC agree to act jointly in offering options, licenses and any agreements related to the commercialization of the Invention to others under the Patent Rights. Utah through its Technology Commercialization Office shall diligently take the lead in, and shall proceed with marketing efforts to identify potential licensees and negotiate all agreements relating to the commercialization of the Patent Rights on behalf of both Parties. Utah shall consult with ABC and will periodically provide negotiation updates while negotiating any such agreement. ABC shall have the right to comment on any negotiations or drafts, and Utah shall consider those comments in good faith and incorporate those comments as it is able, but Utah shall have the right to make any final decisions with respect to such negotiations.

5. EXPENSES AND REVENUE

5.1 Expenses incurred in prosecuting and maintaining the Patent Rights shall be divided between Utah and ABC according to the following percentages: ____% to Utah and ____% to ABC (hereinafter "Patent Expense(s)"). ABC shall reimburse Utah the above percentage of Patent Expenses within thirty (30) days of its receipt of an itemized statement showing the total out of pocket expenditures.

5.2 License Revenue will be shared by the Parties. Any License Revenue will be first applied to any unreimbursed Patent Expenses incurred by Parties and an administration Fee of fifteen percent (15%) to Utah. In addition, after reimbursement of Patent Expenses, the Parties may agree to hold all or a portion of any remaining License Revenue in anticipation of future unreimbursed Patent Expenses. When the Parties agree to distribute License Revenue, ____% License Revenue will be retained by Utah and ____% will be delivered to ABC. Distributions shall be made quarterly or as otherwise agreed in writing by the Parties.

5.3 If the distribution of resources provided by Utah and ABC changes substantially and new patent applications related to the Invention are filed, the distribution of out of pocket expenses and royalties may be assessed and altered by a mutually agreed upon written amendment to this Agreement.

6. TERMINATION

6.1 Either Utah or ABC may terminate this Agreement without cause, and its rights and obligations hereunder by providing sixty (60) days written notice of termination to the other Party. The terminating Party, after providing notice of its intentions, will proceed to meet all obligations, financial or otherwise, to the other Party by the end of the sixty (60) day period, including any steps reasonably necessary to enable the remaining Party to properly manage any pending or issued patents.

6.2 If either Utah or ABC elects to terminate in the manner provided in Section 6.1 above, then the Parties shall retain their full right of ownership in the Patent Rights, including all rights implied at law, provided that any license or transfer made or executed after the notice of

termination does not conflict with any license or transfer made or executed prior to the notice of termination.

6.3 Unless terminated as provided above, this Agreement shall terminate with the expiration of the last to expire patent within the Patent Rights, or on abandonment of all patent or patent applications within the Patent Rights, provided such abandonment is by mutual consent.

7. CONFIDENTIALITY

7.1 ABC and Utah acknowledge that either Party may provide certain information to the other about the Invention and Patent Rights that is considered to be confidential. ABC and Utah shall take reasonable precautions to protect such confidential information. Such precautions shall involve at least the same degree of care and precaution that the recipient customarily uses to protect its own confidential information.

7.2 ABC acknowledges that Utah is subject to the Utah Governmental Records Access and Management Act (“GRAMA”), Section 63-2-101 et. seq., Utah Code Ann. (1953), as amended. Utah and ABC shall keep confidential any information provided to Utah by ABC that ABC considers confidential, to the extent allowable under GRAMA and as provided in Section 53B-16-301 et seq., Utah Code Ann. In order to be eligible for such protection under GRAMA, confidential information of ABC disclosed to Utah must be in written or other tangible form, marked as proprietary, and accompanied by a written claim by ABC stating the reasons that such information must be kept confidential.

8. WARRANTIES

THE PARTIES ACKNOWLEDGE AND AGREE THAT NEITHER PARTY IS MAKING ANY WARRANTY, EXPRESS OR IMPLIED, UNDER THE TERMS AND CONDITIONS OF THIS CONTRACT, INCLUDING BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

9. INDEMNIFICATION

9.1 Each Party shall be responsible for liability resulting from the actions/inactions of

its officer, agents, and employees, acting within the course and scope of their official duties to the Party. Utah is a governmental entity and is subject to the Utah Governmental Immunity Act, Section 63-30(d)-101 et seq., Utah Code Ann. (the “Act”). Nothing in this Agreement shall be construed as a waiver of any rights or defenses applicable to Utah under the Act, including without limitation, the provisions of Section 63-30(d)-604 regarding limitation of judgments. Each Party shall give the other timely notice of any claim or suit instituted of which that Party has knowledge that in any way, directly or indirectly, affects or might affect the other, and the other Party shall have the right at its own expense to participate in the defense of the same.

9.2 Utah will not issue any license or transfer of the Patent Rights without an indemnification provision. Such indemnification provision shall provide that each Licensee shall indemnify, hold harmless and defend Utah and ABC, and their respective officers, employees and agents, against any and all claims, suits, losses, damages, costs, liabilities, fees and expenses (including reasonable fees of attorneys) resulting from or arising out of exercise of: a) any license granted under this Agreement; or b) any negligent act, error, or omission of that Party, its officers, employees, or agents, except where such claims, suits, losses, damages, costs, fees, or expenses result solely from the negligent acts or omissions, or willful misconduct of the other Party, its officers, employees or agents.

10. GENERAL PROVISIONS

10.1 This Agreement embodies the entire understanding of the Parties and supersedes all previous communications, representations or understandings, either oral or written, between the Parties relating to the subject matter hereof.

10.2 Nothing in this Agreement shall prohibit either Utah or ABC from assigning to a third Party their respective interest in the Patent Rights, provided that any such assignment shall include the obligations of this Agreement.

10.3 All notices and communications hereunder shall be forwarded (for Utah) to:

UNIVERSITY OF UTAH
TECHNOLOGY AND VENTURE COMMERCIALIZATION
615 Arapeen Drive, Suite 310
SALT LAKE CITY, UTAH 84108

and (for ABC):

ABC UNIVERSITY

Remainder of Page Left Blank Intentionally

IN WITNESS WHEREOF, Utah and ABC have executed this Agreement by their respective officers hereunto duly authorized, on the day and year hereinafter written.

ABC UNIVERSITY

UNIVERSITY OF UTAH
RESEARCH FOUNDATION

By: _____
_____(Signature)
(Signature)

By:

Name: _____
Parks (Please Print)

Name: Thomas N.

Title: _____
Research

Title: Vice President of

Date: _____

Date:

CONFIDENTIAL DISCLOSURE AND MATERIALS TRANSFER AGREEMENT

THIS AGREEMENT, between _____ having an address at: _____ hereinafter referred to as "Recipient," and the University of Utah, having an address at the University of Utah, Technology & Venture Commercialization, 615 Arapeen Drive, Suite 310, Salt Lake City, Utah 84108, hereinafter referred to as "University," shall govern the conditions of disclosure by University to Recipient of certain confidential information (DATA) and/or materials (MATERIALS) listed in Exhibit "A" relating to: _____, developed by _____, of the University of Utah, bearing university file designation U: _____. MATERIALS, as used herein, include all such materials actually provided to Recipient, plus any materials derived by Recipient directly therefrom.

The Principal Investigator from Recipient, _____ will receive the MATERIALS and DATA and is also bound by the conditions of this Agreement.

NOW THEREFORE, University and Recipient hereby agree:

- (1) Except as provided in (3) below, not to use such MATERIAL or DATA for any commercial purpose, and limit use of DATA and MATERIALS to the purpose described in Exhibit A.
- (2) Except as provided in (3) below, not to disclose DATA to others (except to its employees who reasonably require same for the purposes hereof and who are bound to it by like obligation as to confidentiality) without the express written permission of University.
- (3) Recipient shall not be prevented from using or disclosing DATA:
 - (a) which Recipient can demonstrate by written records was previously known to it;
 - (b) which is now, or becomes in the future, public knowledge other than through acts or omissions of Recipient;
 - (c) which is independently developed by Recipient by those not having access to the DATA and which can be proven through verifiable written records; or
 - (d) which is lawfully obtained by Recipient from sources independent of University without any obligation of confidentiality to the University; or
 - (e) which is required to be disclosed by law or by court order providing Recipient shall make reasonable efforts to limit such disclosure.

- (4) Recipient hereby agrees to provide University with information generated using DATA and MATERIAL.
- (5) Not to use MATERIALS except for the purpose of conducting the non-commercial research described in Exhibit A.
- (6) Not to transfer MATERIALS to any others (except to its employees who are bound to Recipient by like obligations conditioning and restricting access, use, and continued use of MATERIALS) without the express written consent of University; except that Recipient shall not be prevented from transferring MATERIALS which:
 - (a) become publicly available other than through acts or omissions of Recipient; or
 - (b) are lawfully obtained by Recipient from sources independent of University.
- (7) To safeguard MATERIALS against disclosure and transmission to others with the same degree of care as it exercises with its own materials of a similar nature.
- (8) To return all copies of MATERIALS within Fifteen (15) days of the expiration date of this Agreement, unless:
 - (a) this deadline is extended by University in writing before said Fifteen (15) days has elapsed; or
 - (b) Recipient has indicated to University in writing its desire to obtain a commercial license to MATERIALS and negotiations to that end have begun.
- (9) To the extent permitted by law, to hold harmless University against any claims, costs, or other liabilities which may arise as a result of Recipient's use of MATERIALS.
- (10) UNIVERSITY MAKES NO REPRESENTATIONS AND EXTENDS NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED. THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR THAT THE USE OF MATERIALS WILL NOT INFRINGE ANY PATENT, COPYRIGHT, TRADEMARK, OR OTHER PROPRIETARY RIGHTS.

(11) Should Recipient develop a commercially applicable technology utilizing either DATA or MATERIALS, Recipient agrees to inform University of any such development. Recipient further agrees that University and Recipient shall equitably share, based upon relative contribution, any remuneration received should any development utilizing DATA or MATERIALS be commercialized.

With regard to any publications resulting from the use of DATA or MATERIALS, Recipient agrees to:

- (1) Include appropriate Utah Authors, where applicable.
- (2) Submit to the University any publications for review by any University co-authors thirty days prior to submission.

It is further agreed that the furnishing of DATA or MATERIALS to Recipient shall not constitute any grant or license to Recipient under any legal rights now or hereinafter held by University.

Recipient's right to use the DATA and/or MATERIALS shall expire one (1) year from the date of Recipient's signature below. Recipient's obligations under the terms of this Agreement shall remain in effect for five (5) years from the date of Recipient's signature below.

Recipient Institution (Authorized Representative)

University of Utah (Authorized Representative)

By: _____

By: _____

(Signature)

(Signature)

Name: _____

Name: Eric S. Paulsen, Esq.

(Please Print)

(Please Print)

Title: _____

Title: Director, Legal and Strategy, Technology
Venture and Commercialization

Date: _____

Date: _____

Recipient Scientist

I, _____ have read the provisions of
this agreement and agree to abide by and am
bound by all conditions of this Agreement.

By: _____

(Signature)

Name:

(Please Print)

Title: _____

Date: _____

“Exhibit A”

MATERIAL:

PURPOSE: