

## HydroGEN Intellectual Property Management Plan

The goals of this Intellectual Property (“IP”) Management Plan (“IPMP”) are to

- (i) establish streamlined procedures for managing intellectual property among the HydroGEN laboratory resource network consortium (“HydroGEN”) Members, and
- (ii) provide guidance for effective and coordinated efforts to commercialize advanced water splitting/renewable hydrogen generation technologies into the market.

### **1. Definitions**

- a. “Background IP” means any IP that is owned by a Member (defined below) and meets all of the following conditions (as determined by each Member with respect to its own IP):
  - (i) relevant to the Core Research Area and was developed before or outside the HydroGEN Program, (ii) may be necessary for use in the Core Research Areas as defined in paragraph 1.c. below, and (iii) may be necessary to practice Program IP.
- b. “Contributed Background IP” means any Background IP that has been contributed to the collection of Program IP for the purpose of bundling and licensing.
- c. “Core Research Area” means technologies in electrolysis, photoelectrochemical hydrogen production, solar thermochemical hydrogen production, and other avenues of renewable hydrogen generation, regardless of whether funded under the HydroGEN Program or under some other program or funding source (private and federal) through HydroGEN.
- d. “HydroGEN Concierge” means the National Renewable Energy Laboratory.
- e. “HydroGEN CRADA” means a Cooperative Research and Development Agreement between DOE Contractor Member(s) and HydroGEN Partner(s) to conduct research activities pursuant to the HydroGEN Program.
- f. “HydroGEN Funding” as used in this document means the funding awarded by the Department of Energy (DOE), or other federal agency to HydroGEN for consortium management and research and development projects, or commercial funding under Cooperative Research and Development Agreements (CRADAs).
- g. “HydroGEN IP” means Program IP and Contributed Background IP.
- h. “HydroGEN MMTA” means the Master Material Transfer Agreement that is used to transfer materials for research under the HydroGEN Program.

- i. "HydroGEN NDA" means a Non-Disclosure Agreement (NDA) for use by DOE Contractor Member(s) and HydroGEN Partner(s) for sharing of information related to the HydroGEN Program.
- j. "HydroGEN Partner" means a non-DOE Contractor Member engaged in the HydroGEN Program who has signed a HydroGEN CRADA.
- k. "HydroGEN Program" means the research program and projects conducted by and amongst the Members using HydroGEN Funding.
- l. "Intellectual Property" or "IP" means patents, trademarks, copyrights, mask works, inventions contained in Protected CRADA Information, or other forms of comparable property rights protected by Federal Law or foreign counterparts, not including trade secrets.
- m. "Inventing Member" means a Member or Members having an ownership interest in Program IP.
- n. "IP Committee" means the Member representatives, with one (1) representative from each Member, who will serve to guide the process of assembling Background IP and Program IP into "IP Bundles" of licensable IP and facilitate the protection and licensing of these IP Bundles to industry. IP Committee representatives are listed on Addendum 1 to this Plan and shall be updated as warranted during the HydroGEN Program. The IP Committee representative from the HydroGEN Concierge will serve as Committee Chair.
- o. "Members" means collectively, the DOE Contractor Members and the DOE owned and operated Laboratories specifically named in Section 4a, below.
- p. "Patent Bundle" or "IP Bundle" means any combination of Contributed Background IP and/or Program IP administered by the HydroGEN Program and available for licensing.
- q. "Program Intellectual Property" or "Program IP" means Intellectual Property created, conceived or first actually reduced to practice with HydroGEN Funding under the HydroGEN Program; provided, however that copyright in scientific and technical articles published in academic, technical or professional journals, symposia proceedings or similar works is specifically excluded from "Program Intellectual Property." For the purpose of clarity, Program Intellectual Property can include computer software.
- r. "Protected CRADA Information" shall have the meaning set forth in Article I Section H of the Model DOE CRADA attached to DOE O 483.1A.

## **2. Background**

- a. The HydroGEN Program is managed by the HydroGEN Concierge and was established as part of the Energy Materials Network, under the U.S. Department of Energy's Clean Energy Manufacturing Initiative.
- b. The HydroGEN mission is to create and manage a world class network of unique and accessible technical capabilities that are highly relevant to industrial needs in renewable hydrogen production, and provide unprecedented ease-of-access to the national lab capability network through a single point-of-contact, the HydroGEN Concierge, to connect industry engaged in electrolysis, photoelectrochemical hydrogen production, solar thermochemical hydrogen production, and other avenues of renewable hydrogen generation with the laboratory resource network; capture, share, and leverage expertise, data, and tools amongst the Members; facilitate rapid completion of agreements for HydroGEN Partners; and pursue approaches to reduce non-technical burdens on industry seeking to leverage HydroGEN IP.
- c. This IP Management Plan is intended to further HydroGEN's mission by promoting a consistent, uniform, and simplified approach to the reporting, management and disposition of HydroGEN IP rights.

## **3. Operating Principles**

- a. The HydroGEN Programs covered under this IP Management Plan could be funded in three ways: (1) Funding Opportunity Announcements (FOA), (2) DOE direct funding, and (3) industry funded research with single or multiple Members.
- b. For industry funded research with single or multiple Members, a HydroGEN CRADA will be used.
- c. For all the above mentioned funding scenarios, the HydroGEN CRADA will be used to streamline the partnering with industry. The protection of any Intellectual Property that is developed under these agreements will be handled in accordance with the terms of that agreement and this IP Management Plan.
- d. If and when any IP that is developed under a HydroGEN CRADA becomes available for general licensing opportunities and is relevant to HydroGEN, it may be included in the

collection of HydroGEN IP, and the Inventing Member(s) shall be responsible for licensing with input from the IP Committee, as requested.

- e. The Members will agree upon a standard HydroGEN NDA and HydroGEN MMTA to be used by HydroGEN Partners and Members for collaborations under the HydroGEN Program.

#### **4. Members**

- a. HydroGEN is currently comprised of the following DOE Laboratories and their Management and Operations Contractors (“DOE Contractor Members”), if applicable:
  - Sandia Corporation, a Delaware Corporation, operator of Sandia National Laboratories (SNL) under Contract Number DE-AC04-94AL85000 with the DOE;
  - The Regents of the University of California, operator of Ernest Orlando Lawrence Berkeley National Laboratory (LBNL) under Contract Number DE-AC02-05CH11231;
  - Alliance for Sustainable Energy, LLC, operator of National Renewable Energy Laboratory (NREL) under Contract Number. DE-AC36-08GO28308;
  - Lawrence Livermore National Security, LLC (LLNS), operator of Lawrence Livermore National Laboratory (LLNL) under Contract Number DE-AC52-07NA27344.
  - Battelle Energy Alliance, LLC, operator of Idaho National Laboratory (INL) under Contract Number DE-AC-07-05ID14517;
  - Savannah River Nuclear Solutions, operator of Savannah River National Laboratory under Contract Number DE-AC09-08SR22470.
- b. New Members. Members who have already signed the Agreement will not be required to resign this IPMP when a new Member is added. New Members must execute the agreement “as-is”. Upon addition of a new Member, the HydroGEN Concierge shall send a courtesy copy to all Members of the Agreement reflecting the addition.

#### **5. Intellectual Property Protection and Ownership**

- a. Operating Principles. Licensing of HydroGEN IP will be managed by the relevant Inventing Members with input from the IP Committee, which will endeavor to maximize value of technology developments made by Members and minimize barriers to licensing

and commercialization. Such input will be for consideration by the Inventing Members. All Inventing Members will still own, control, and prosecute their respective HydroGEN IP. Joint Inventing Members may appoint a single Inventing Member to manage and facilitate the filing, prosecution, and maintenance of patents and registration of copyrights for HydroGEN IP. All Inventing Members filing patent applications on their Program IP are responsible for those patent costs and joint Inventing Members shall determine any cost sharing obligations outside of this IPMP, through such means as an Inter-Institutional Agreement.

- b. Background IP. Members agree to disclose existing Background IP, which they determine to be relevant to the HydroGEN Core Research Area, to the IP Committee. Background IP will still be owned by the Inventing Member (and any other relevant parties, as applicable) with the option to voluntarily submit Contributed Background IP to the HydroGEN Program for licensing.
- c. Contributed Background IP. At the same time that an Inventing Member designates Background IP as Contributed Background IP pursuant to 5b, such Inventing Member will also disclose which licensing rights are available for the Contributed Background IP. Such disclosure will specify the following information related to licensing: exclusivity, fields of use, and temporal and geographic limitations.
- d. Each of the Members shall have the sole discretion as to whether or not to contribute its Background IP at any level to the collection of Contributed Background IP for bundling and licensing. Disclosures will be solicited by the IP Committee under such procedures as the IP Committee considers appropriate. Contributed Background IP will be made available on the HydroGEN website for licensing.
- e. Program IP. Program IP shall be disclosed by Inventing Members to the IP Committee soon after the invention disclosure and IP filing notifications are reported to DOE.
  - i. Inventing Members shall provide a non-confidential title and abstract of any newly created Program IP to the IP Committee Chair, ideally within ninety (90) days of reporting to DOE. The IP Committee Chair shall notify all Members of the existence of new Program IP by disseminating the non-confidential title and abstract of Program IP to all Members.

- ii. The IP Committee will work collaboratively with all Inventing Members to assist in identifying IP that may warrant protection and identify potential licensing opportunities.
  - iii. Inventing Members who are DOE Contractor Members shall have the time specified in their prime contracts with the DOE for the management and operation of the Federal Laboratory (“Prime Contract”) to elect to retain title and/or file patent applications to protect the Program IP if the Inventing Member elects to do so. Each Member shall protect its Program IP according to its standard practices, if it elects to do so. Upon such filing, the Inventing Member shall send a copy of the patent applications or other full description of the Program IP to the IP Committee Chair within a reasonable time. Within ten (10) business days, the IP Committee will disseminate copies of such patent applications or other full descriptions covering such Program IP to all Members who have requested such copies. Disclosure to HydroGEN Partners upon approval of the Inventing Member(s) shall be subject to the intended recipient entering into the standard HydroGEN Non-Disclosure Agreement (NDA).
- f. Program IP Ownership. Ownership of any Program IP shall be determined in accordance with applicable state and federal law and as required by DOE Contractor Members’ Prime Contracts. Any assignment of rights between an inventor, author or other individual involved in the creation of Program IP and the Inventing Member who sponsors or employs him or her shall be governed by the law and policies applicable to the sponsoring Inventing Member. Rights to inventions made by government employees shall be governed by 37 CFR Part 501.

## **6. Intellectual Property Licensing**

- a. Operating Principles. In an effort to further HydroGEN’s commercialization goals to
  - i. establish procedures for developing, managing and accessing HydroGEN IP among the Members, and
  - ii. provide effective and coordinated efforts to commercialize existing technologies and technologies developed in HydroGEN, and

- iii. comply with legal and contractual requirements applicable to the DOE Contractor Members.

The Inventing Member will be responsible for all licensing activities related to its HydroGEN IP. Inventing Members will consider any guidance provided by the IP Committee, which will operate as the centralized licensing assistance organization for HydroGEN. The IP Committee will review HydroGEN IP, create IP Bundles, assist in identifying potential licensees of IP Bundles, notify the Inventing Member(s) of licensing opportunities, and advise Inventing Member(s) regarding licensing strategies in accordance with DOE licensing guidelines and HydroGEN Program goals. The IP Committee will also promote the expedient fulfillment of Fairness of Opportunity requirements.

- b. The Members agree that Contributed Background IP may be withdrawn for separate licensing outside HydroGEN at any time upon written notice to the IP Committee; however, Program IP shall remain in the collection of HydroGEN IP for licensing. Any licenses containing the withdrawn Background IP that have already been executed and include other HydroGEN IP at the time of withdrawal will not be affected by the withdrawal and will continue to exist with the full rights granted. If the resultant separate license is something less than an exclusive (or limited exclusive) license in all relevant fields of use, the Inventing Member may, at its sole discretion, reintroduce that Background IP back into HydroGEN as Contributed Background IP.
- c. HydroGEN IP—Member Internal Research Use. Each Member recognizes that all Members have the right to use HydroGEN IP for internal, non-commercial research purposes under retained federal government rights as needed for a Member to conduct federally-sponsored work.
- d. Members agree that:
  - i. Any Member contacted by a potential licensee of HydroGEN IP will notify the IP Committee of the potential licensing opportunity.
  - ii. The IP Committee will endeavor to identify other Contributed Background IP and Program IP that could be bundled for licensing.
  - iii. If there is a single Inventing Member for the HydroGEN IP of interest, the Inventing Member will serve as the licensing lead.

- iv. If the HydroGEN IP of interest is jointly owned IP or an IP Bundle, the IP Committee may assist Inventing Members in selecting a licensing lead to serve as the single point of contact for the commercial licensee on behalf of the Inventing Members and HydroGEN. In this case, the licensing lead will work with the Inventing Members to negotiate and license the IP collaboratively, or there could be a single license agreement for the IP Bundle.
- e. Members will endeavor to license HydroGEN IP under commercially reasonable terms, in compliance with relevant contract, regulatory and legislative requirements applicable to the Inventing Member(s). Members shall also endeavor to have each license agreement include patent cost recovery, which will be distributed amongst the Inventing Members as determined by the separate management agreement among all Inventing Members for that HydroGEN IP, such as an Inter-Institutional Agreement (IIA). Inventing Members agree that they shall endeavor to approve and sign final license agreements in an expeditious manner.
- f. The IP Committee will be notified of the final license and shall determine how the license impacts HydroGEN IP; and may remove the licensed IP from consideration for further licensing.

## **7. Publication**

Members intend to publish the findings of research and development activities under the HydroGEN Program. In addition, Members shall have a reasonable opportunity to seek any patent or other protection for their Program IP. In the case of jointly owned IP, Inventing Members will provide each other with a reasonable period of time to seek patent protection. When HydroGEN Funding is transferred to Members through CRADAs with HydroGEN Partners, Members recognize that publications may require review by HydroGEN Partners in accordance with CRADA terms and that export control regulations must be followed. To the extent possible, Members may share their research findings within the general research community through annual meetings, professional conferences, and publications. Members will endeavor to notify the IP Committee prior to any public dissemination of research findings impacting HydroGEN IP. Members should be aware that LBNL does not mark any data it creates under a CRADA as Protected CRADA Information.



## **8. Member Cooperation.**

This IP Management Plan is intended as guidance for the Members and a pledge to cooperate with each other to further the interests of the HydroGEN Program and promote the sharing and commercialization of new technologies. In that spirit, the Members agree to follow the principles set forth in this agreement and allow these principles to evolve to meet the needs of the HydroGEN Program. Although the Members have determined that they are in agreement with the principles set forth herein, this IP Management Plan is not intended to supersede any prior contract or other conflicting obligations, and all Members agree that failure to comply with any of the terms of this IP Management Plan shall not create a liability by the non-complying Member. This IP Management Plan may be modified by executing written amendments signed by the Members.

Example

## Addendum 1: IP Committee Membership

NREL (Committee Chair): Eric Payne, [eric.payne@nrel.gov](mailto:eric.payne@nrel.gov), 303-275-3166

SNL: Rachel Wallace, [rwallac@sandia.gov](mailto:rwallac@sandia.gov), 925-294-4896

LBNL: Catherine Shih Koh, [cskoh@lbl.gov](mailto:cskoh@lbl.gov), 510-486-5997

LLNL: Annemarie Meike: [meikel@llnl.gov](mailto:meikel@llnl.gov), 925 422 3735

SRNL: Matthew J. Biasiny: [matthew.biasiny@srnl.doe.gov](mailto:matthew.biasiny@srnl.doe.gov), 808-725-0406

INL: Ryan Bills: [ryan.bills@inl.gov](mailto:ryan.bills@inl.gov), (208) 526-1896

Example