DEPARTMENT OF COMMERCE

Patent and Trademark Office

[Docket No.: PTO-C-2024-0004]

Request for Comments: Unlocking the Full Potential of Intellectual Property by Translating More Innovation to the Marketplace

AGENCY: United States Patent and Trademark Office, Department of Commerce.

ACTION: Request for comments.

SUMMARY: American innovation is a cornerstone of our strong, vibrant economy, with robust development of emerging and early-stage innovation spurring entrepreneurship and other economic activity. Intellectual property (IP) forms the bridge that moves innovation to impact for the benefit of society. The United States Patent and Trademark Office (USPTO, or the Agency) is committed to supporting translation of innovations to the marketplace through commercialization and is seeking public comment on how the agency can build on current initiatives to advance this commitment. The USPTO, with support from the National Oceanic and Atmospheric Administration (NOAA), the National Institute of Standards and Technology (NIST), and the National Science Foundation (NSF), seeks input on new ways to unlock the potential of intellectual property for the public good by fostering pathways for innovation to reach the marketplace, with particular attention to green, critical, and emerging technologies.

DATES: To ensure consideration, written comments must be received by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. Please note that comments submitted after [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] will not be considered.

ADDRESSES: You may submit written comments as follows. For reasons of government efficiency, comments must be submitted through the Federal eRulemaking Portal at www.regulations.gov. To submit comments via the portal, enter docket number PTO-C-2024-
0004 on the homepage and select “Search.” The site will provide a search results page listing all
documents associated with this docket. Find a reference to this request for comments and select
the “Comment” icon, complete the required fields, and enter or attach your comments.
Attachments to electronic comments will be accepted in ADOBE® portable document format
(PDF) or MICROSOFT WORD® format. Because comments will be made available for public
inspection, information that the submitter does not desire to make public, such as an address or
phone number, should not be included in the comments.
Visit the Federal eRulemaking Portal for additional instructions on providing comments via the
portal. If electronic submission of comments is not feasible due to a lack of access to a computer
and/or the internet, please contact the USPTO using the contact information below for special
instructions regarding how to submit comments by mail or by hand delivery.

FOR FURTHER INFORMATION CONTACT: Parikha Mehta, USPTO, Office of the Under
Secretary, at 571-272-3248 or parikha.mehta@uspto.gov. Please direct media inquiries to the
USPTO's Office of the Chief Communications Officer at 571-272-8400.

SUPPLEMENTARY INFORMATION: Intellectual property rights create a critical engine
that powers our economy and supports our nation as a global leader in innovation and
entrepreneurship. For example, patents drive our nation's technological progress and
achievement by incentivizing and protecting new ideas, encouraging investment in creative
problem solving, and promoting knowledge sharing to inspire others to engage in follow on
innovation. When brought to the market through commercialization, patented products save
lives, improve our standard of living, and address some of the pressing issues to solve global
challenges.

Through this request for comment, the USPTO seeks input on what more the Agency can do to
accelerate and incentivize commercialization of innovation. The USPTO also invites specific
input on what the Agency can do to accelerate and incentivize the commercialization of green,
critical, and emerging technologies. We seek to better understand how the USPTO might build
on and expand our current initiatives in this space, detailed below, through direct agency work, through collaboration with other agencies or institutions such as NOAA, NIST, and NSF, as the principal advisor to the President and the Administration on IP through the Secretary of Commerce, and as a technical advisor to Congress on IP. While the USPTO is proud of our recent initiatives to ensure robustness and reliability of IP, as well as the role the agency is playing in the current dialogue on Bayh-Dole rights, pandemic preparedness, and Trade-Related aspects of Intellectual Property Rights waivers, those topics are beyond the scope of this request for comment. Here, we specifically focus on opportunities for positive public impact by bringing innovation to market through commercialization, for example via the licensing of IP rights. Public comments on this notice will be used to evaluate possibilities for amplifying the impact of our current work, and to explore new ways to support the transfer of innovation to the marketplace.

As used here, “technology transfer,” “tech transfer,” and “commercialization” interchangeably refer to the cycle of bringing new technologies to the public through the marketplace, which is often made possible by the licensing of IP rights such as patents.

**Patents lead to positive public impact through commercialization**

Bringing innovation to the marketplace through commercialization serves the greater good by creating jobs, improving economic prosperity, and solving world problems. IP rights such as patents play a key role in our economy, creating a mutually beneficial risk-tolerance paradigm for both patent holders and commercialization partners. Patents allow innovators to retain ownership and integrity of their technology while also incentivizing partners to provide the critical resources and support needed to bring that new technology to market through licensing. The societal benefits of this IP rights commercialization paradigm are directly evident in the success of the U.S. economy. For example, in 2019, the U.S. industries that relied most heavily on intellectual property (“IP-intensive” industries) accounted for $7.8 trillion in gross domestic
product or 41% of domestic economic activity and account for 63 million jobs, or 44% of all U.S. jobs.\(^1\) These industries also provided 79% (or $1.31 trillion) of all U.S. commodity exports in that year.

Without IP commercialization, we might not have internet search algorithms, the artificial lung, or life-saving COVID-19 therapies. By continuing to build a strong IP system that encourages the transfer of technological advances to the marketplace, we can foster the emerging technologies of the future, such as those that will mitigate the effects of climate change or prepare us for future global health challenges. We also recognize the importance of balancing IP commercialization and innovation with work to increase competition and prevent unnecessary barriers for new entrants into the market.

**Current Initiatives**

The following examples of current initiatives illustrate our existing efforts in the tech transfer space, as a reference point for considering ways we might expand or add to this work for greater impact.

1. **General Innovation and Technology Transfer**

   The USPTO continues to prioritize the development of ecosystems that can unlock IP to create jobs and solutions by translating that IP to the market across sectors, including key technology areas such as healthcare, manufacturing, and climate resilience. The USPTO has built tech transfer into its 2022-2026 strategic plan, making it one of the five overarching goals driving the USPTO’s work to “bring innovation to impact for the public good”.\(^2\) As explained in the strategic plan, the USPTO is focused on driving innovation for long-term economic growth,

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supply chain resiliency, prosperity, and national security. Getting IP-protected goods and services into the hands of those who can benefit from them via the marketplace is a critical component of U.S. innovation, inclusive capitalism, and global competitiveness.

We are expanding our efforts to help those pursuing IP protection identify available funding sources—public and private—to bring their innovations to impact for the public good. To further promote U.S. competitiveness and economic growth, we are partnering with other government agencies to provide IP education for federally funded innovators, and to strategize and explore the commercialization of innovation for job creation. We are advocating for policies that support the creation, protection, and enforcement of IP rights, domestically and abroad. As a leader in the global IP ecosystem, the USPTO is providing expertise to IP stakeholders to facilitate best practices.

The USPTO is working closely with colleges and universities, including Historically Black Colleges and Universities (HBCUs) and Minority Serving Institutions (MSIs), as well as professionals and organizations focused on tech transfer, to explore ways in which the USPTO can collaborate with other agencies and with the private sector to improve and enhance the conversion of IP developed through research into impactful real-world solutions.

The USPTO recognizes the need for tools that help connect IP rights owners with funders, so that IP can be realized in the marketplace. For example, during the recent pandemic, we launched an IP marketplace platform that connects the owners of COVID-19 related technologies with funders seeking to commercialize those types of solutions. The Patents 4 Partnerships platform is a voluntary listing of patents and patent application publications indicated as “available for licensing” on external public websites or in the USPTO Official Gazette Notices. It also includes links to sources that include the licensing information.
The USPTO recognizes that it will take joint efforts across the entire innovation and commercialization ecosystem to optimally facilitate getting great ideas to impact. For that reason, the USPTO has been working across the U.S. government and with the private sector and universities – including through the USPTO’s work with other agencies such as NOAA, NIST, and NSF, through its Council for Inclusive Innovation (CI²) and through the Economic Development Administration’s Entrepreneurship – on identifying challenges and opportunities related to innovation and commercialization.

NIST plays a critical role in the facilitation of federal technology transfer by analyzing, planning, coordinating, reporting, and exercising general oversight of technology transfer responsibilities under section 5 of the Federal Technology Transfer Act of 1986 (15 U.S.C. 3710(g)) and Executive Order (E.O.) 12591 of April 10, 1987. NIST co-chairs the National Science and Technology Council’s Lab-to-Market Subcommittee, which establishes goals, measures performance, streamlines administrative processes and facilitates local and regional partnerships to help foster a healthier environment for R&D commercialization. NIST also convenes the Interagency Working Group for Technology Transfer to identify and disseminate creative approaches to technology transfer from Federal laboratories, advises and assists on federal technology transfer studies, and identifies and coordinates responses to technology transfer policy issues through an interagency task force. NIST also acts as the host agency for the Federal Laboratory Consortium (FLC). The FLC is the nationwide network of federal laboratories that fosters commercialization, best practice strategies, and opportunities for accelerating federal technologies out of the labs and into the marketplace.

II. Innovation and Tech Transfer for Green Technology

In addition to its focus on tech transfer in general, the USPTO also recognizes the more specific and immediate need to accelerate the transfer of green technology and climate innovations to the marketplace. In January 2022, the National Oceanic and Atmospheric Administration (NOAA), a sister bureau within the Department of Commerce, reported that 2021 was the fourth warmest year on record for the United States, with 20 separate climate- and weather-related disasters costing over $1 billion each in the United States alone.\(^5\) Last year, 2023, fared no better, registering as the hottest year on record for the planet.\(^6\)

That is why, under the Biden Administration, the USPTO has been focused on initiatives to incentivize the advancement and commercialization of climate innovations. In June 2022, the USPTO launched the Climate Change Mitigation Pilot Program,\(^7\) which expedites initial examination of certain patent applications for innovations that reduce greenhouse gas emissions. Qualifying patent applications are advanced out of turn (that is, granted special status) until first action on the merits by a patent examiner with no charge for the petition to make special. The program\(^8\) supports President Biden’s January 27, 2021 Executive Order on Tackling the Climate Crisis at Home and Abroad\(^9\) and ties directly into the administration’s priority to reach net-zero greenhouse gas emissions.\(^10\) In June 2023, the USPTO extended and expanded the program to also include innovations that are designed to remove, prevent, and/or monitor greenhouse gas emissions.\(^11\)

The USPTO has also worked with innovators in the green tech space to promote the use of intellectual property to protect and commercialize innovations on major tech platforms in the

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\(^6\) https://www.usatoday.com/story/news/nation/2024/01/01/2023-was-earths-hottest-year-experts-say/71882923007/ 
\(^8\) https://www.uspto.gov/patents/laws/patent-related-notices/climate-change-mitigation-pilot-program 
\(^11\) Expansion and Extension of the Climate Change Mitigation Pilot Program, 88 FR 35841 (June 1, 2023).
U.S. and abroad. As part of that work, the USPTO hosted its first ever Green Energy Innovation Expo in May 2023, in collaboration with the Federal Laboratory Consortium and the Association of University Technology Managers. The event facilitated partnerships between businesses and federal laboratories, universities, and private-sector innovators—including government-funded startups—offering a wide range of green energy technologies for licensing, including green hydrogen, energy storage, and wind energy.

To bring more green tech and climate innovation to impact, the USPTO is also engaging in several collaborative partnerships. In July 2022, the USPTO became a technology partner to the global green-technology platform of the World Intellectual Property Organization (WIPO), WIPO GREEN. WIPO GREEN is a public-private partnership established by WIPO in 2013, with more than 145 international partners including major technology companies, intellectual property offices, business groups, research institutes, and nongovernmental organizations. The partnership provides an online platform for technology exchange, connecting providers and seekers of environmentally friendly technologies, and organizing acceleration projects, conferences, and international events that highlight the availability of green technologies.

The USPTO is also collaborating across government, including with the Department of Energy, the NSF, and NOAA to jointly promote the commercialization of green technologies. The USPTO engaged in a detail exchange program with NOAA that focuses on the intersection of IP and climate and environmental technologies. USPTO expertise helps NOAA raise awareness and understanding of intellectual property concepts across its research workforce, to achieve a shared organizational understanding of the importance of IP. In return, NOAA is overseeing

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12 See, for example, the May 2022 Remarks by USPTO Director Kathi Vidal at the ARPA-E Energy Innovation Summit available at https://www.uspto.gov/about-us/news-updates/remarks-uspto-director-kathi-vidal-arpa-e-energy-innovation-summit.
13 https://www.uspto.gov/about-us/events/green-energy-innovation-expo
14 https://www3.wipo.int/wipogreen/en/
16 https://www.uspto.gov/blog/director/entry/patenting-innovation-in-climate-science
climate science training for USPTO patent examiners and advising the USPTO on future green initiatives. This collaboration is ongoing and has already resulted in positive outcomes, including a formal memorandum of understanding between USPTO and NOAA that defines areas for future work to encourage sustainable economic development while supporting climate and environmental stewardship.\(^\text{17}\)

Internationally, the USPTO hosted and led the 2023 annual meeting of the largest IP offices in the world – the European Patent Office, the Japan Patent Office, the Korean Intellectual Property Office, and the China National Intellectual Property Administration (collectively with USPTO referred to as the IP5) – along with WIPO, which focused on sustainability and green tech along with finding ways to work across the offices to bring more green tech innovations to market. The USPTO recently hosted a sustainable innovation dialogue\(^\text{18}\) during which the offices discussed how we can work together towards a goal of net-zero carbon emissions to help mitigate climate change and preserve our environment. The IP5 leaders also shared information on initiatives that encourage patent filings in climate technologies in their countries, streamline examination, and encourage eco-friendly efforts, such as paperless filing and energy efficiency. The USPTO brought together innovators, accelerators, and funders, as well as NOAA, to determine how we can be a catalyst to bring climate change technologies from research to the marketplace.

To memorialize the IP5 offices’ commitment to sustainability, the offices adopted a new vision statement: “Building a sustainable future by fostering innovation and economic growth through an inclusive and accessible patent system. Promoting patent protection through harmonization of practices and procedures, high-quality and timely search and examination results, worksharing

and access to patent information, and achieving an efficient, cost-effective and user-friendly international patent landscape.”

And, to ensure the work done at the gathering had maximum impact, the Offices compiled and published a “Climate Initiatives Booklet.”

### III. Innovation and Tech Transfer for Critical and Emerging Technologies

The White House issued an updated list of critical and emerging technologies in February 2022. The list includes “a subset of advanced technologies that are potentially significant to the U.S. national security. The 2021 Interim National Security Strategic Guidance defines three national security objectives: protect the security of the American people, expand economic prosperity and opportunity, and realize and defend democratic values.” The list includes everything from AI to quantum information technologies to semiconductors and microelectronics.

The USPTO has been actively involved with the Biden Administration on policies related to critical and emerging technologies, including artificial intelligence and standards policies. To support the Biden Administration and U.S. Department of Commerce’s work on supply chain resiliency in the semiconductor space, and enhance the impact of the Creating Helpful Incentives to Produce Semiconductors (CHIPS) Act, the USPTO launched the Semiconductor Technology Pilot Program in December 2023. The pilot program is designed to accelerate improvements in

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24 Semiconductor Technology Pilot Program, 88 FR 83926 (December 1, 2023). See also https://www.uspto.gov/SemiconductorTechnology
the semiconductor industry by expediting examination of patent applications for certain semiconductor manufacturing innovations.

Under the Biden Administration, the USPTO additionally launched its first artificial intelligence (AI) and emerging technology (ET) partnership, an ongoing cooperative effort between the USPTO and the AI/ET community, including academia, independent inventors, small businesses, industry, other government agencies, nonprofits, and civil society. Through the AI/ET Partnership, the USPTO engages the AI/ET community on USPTO AI/ET efforts, such as using AI and ET to enhance the quality and efficiency of patent and trademark examination. The USPTO’s Office of the Chief Economist has also published reports on AI diffusion, and the Agency is actively collaborating with other agencies on AI-related issues.

Request for Comment

The USPTO requests comment from all interested parties, including innovators, patent holders, patent applicants, patent licensees, academic personnel (faculty, researchers, administrators), entrepreneurs, consumers of patented products, public interest groups, and other parties interested in and engaged in innovation, research, development, licensing, or commercialization of technology. Responses may address direct agency work, USPTO collaboration with other agencies or institutions such as NOAA, NIST, or NSF, USPTO’s role as a principal advisor to the President and the Administration on IP through the Secretary of Commerce, and/or USPTO’s role as a technical advisor to Congress on IP.

Respondents may address any (or none) of the following questions. When possible, respondents should identify which question(s) relate to their comments. Respondents may organize their submissions in any manner.

In particular, the USPTO seeks the following information:
1. Please identify the biggest challenges to, and opportunities for, commercialization of innovation through use of the intellectual property system. Please identify what concrete measures the USPTO can take to help.

2. Are there any IP-related challenges or opportunities that are specific to commercializing green technology and climate technologies? Please identify what concrete measures the USPTO can take to help.

3. Are there any IP-related challenges or opportunities that are specific to commercializing critical and emerging technologies? Please identify what concrete measures the USPTO can take to help.

4. Please identify any changes to IP policies and practices that may help streamline or accelerate commercialization of IP in general.

5. Please identify any changes to IP policies and practices that may help streamline or accelerate commercialization of green technology and climate technologies.

6. Please identify any changes to IP policies and practices that may help streamline or accelerate commercialization of critical and emerging technologies.

7. Please identify any IP-related challenges that interested parties face when licensing or acquiring technologies and identify any changes in the law, policies or practices which could help alleviate these challenges.

8. Please identify challenges that interested parties face when attempting to identify potential licensees, and when licensing intellectual property. Please identify any changes in the law, policies or practices that could help alleviate these challenges.

9. Please provide any feedback on the USPTO’s Patents 4 Partnerships platform, including any experience with the same, whether it should be expanded to include patents across all sectors, and any comments on how it can otherwise be improved. Please also identify what additional,

25 https://developer.uspto.gov/ipmarketplace/search/platform
concrete measures the USPTO can take to better facilitate connections between innovators and funders.

10. Please provide any feedback on the WIPO GREEN\textsuperscript{26} initiative including any experience with the same and any comments on how the USPTO may better leverage its role as a partner to enhance the success and influence of the initiative.

11. Please identify opportunities for the USPTO to minimize any current challenges related to commercialization for certain persons, technologies, industries, or companies. If available, please provide supporting data that illustrates the impact of these challenges on those select groups.

12. Please identify opportunities for the USPTO to help underrepresented groups, individual inventors, and small and medium-sized enterprises to gain enhanced awareness of and access to resources for commercializing their innovations and suggest ways to overcome existing challenges that undermine the realization of this goal.

13. Please identify opportunities for the USPTO to expand research commercialization opportunities through IP rights for MSIs, and HBCUs, including any data or information related to the development of research commercialization at these institutions.

14. Please identify any role that the USPTO can play in incentivizing innovations in commercially viable technologies.

15. Are there any laws or practices in other countries that are effective in bringing IP to market? If so, please identify, explain, and indicate how they can be adapted to be applied within the framework of the U.S. patent law, or explain what new legislation would be needed.

\textbf{Katherine K. Vidal,}
\textit{Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office.}

[FR Doc. 2024-05504 Filed: 3/14/2024 8:45 am; Publication Date: 3/15/2024]

\textsuperscript{26} https://www3.wipo.int/wipogreen/en/