Before the
**Federal Communications Commission**
Washington, D.C. 20554

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| In the Matter of | ) | |
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| Dynetics, Inc. Request For Limited Waiver | ) | WT Docket No. 19-39 |
| of Temporary Freeze on Non-Federal | ) | |
| Applications in the 3100-3550 MHz Band | ) | |

***WAIVER—EXPEDITED ACTION REQUESTED***

# REQUEST FOR LIMITED WAIVER



**DYNETICS, INC.**

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## TABLE OF CONTENTS

## SUMMARY

To reverse the severe unintended impact of the Freeze with respect to the ongoing deployment of technologically-superior Part 90 Radiolocation Service solutions in the lower 3 GHz band (i.e., 3100-3300 MHz – the "Lower 3 GHz Segment"), Dynetics, Inc. seeks Commission grant of a limited and very narrowly-tailored waiver of the 3100-3550 MHz Freeze to permit the filing, processing and grant of Part 90 Radiolocation Service applications for new and modified facilities in the Lower 3 GHz Segment, with such applications restricted to the following parameters:

- Eligible applicants shall be limited exclusively to operators of facilities within the 16 critical infrastructure sectors defined by the United States Department of Homeland Security National Infrastructure Protection Plan, and the purpose of the operations must be solely to support infrastructure surveillance and protection.

- The requested transmissions must originate solely within the property of the owner/operator of such critical infrastructure operations, and must be ground-based operations (not airborne).

- Such applications must request only discrete carrier frequencies within 3100-3300 MHz and the occupied bandwidth must not extend outside such range.

- Such applications must request authority for no more than 6 discrete carrier frequencies per licensed location.

- In addition, Dynetics proposes that the "Conditions" listed at Section IV(D) herein be imposed in connection with the grant of such waiver.

The policy of the United States requires federal agencies to support private sector development of technologies/systems capable of providing reliable and effective security, surveillance and deterrence of threats to critical infrastructure. The common requirement for critical infrastructure operators – regardless of sector – is the need to plan, evaluate and deploy their infrastructure protection plans on a long-term basis. These operators must have the unfettered ability to obtain Commission-issued licenses authorizing the operation of state-of-the-art radiolocation technologies for infrastructure surveillance and protection. Decisions regarding radiolocation technologies must be made early on in the process and, once selected, such technologies become essential components of the multi-year planning and deployment process for these critical infrastructure protection systems.

Critical infrastructure operators have for years actively licensed and deployed Commission-licensed radiolocation solutions within the Lower 3 GHz Segment for the purpose of infrastructure surveillance and protection. From a technological perspective, radiolocation solutions within 3100-3300 MHz utilize specific propagation and atmospheric conditions unique to this frequency range, which provides superior performance compared to higher frequency bands. Dynetics' GroundAware® system, for example, provides superior functionality in this frequency range. To date, Part 90 Radiolocation Service licenses for GroundAware® products have been issued in over fifty locations. The long-term duration of Part 90 Radiolocation Service licenses (i.e., 10 years) is necessary in order to allow critical infrastructure applicants to realistically commit the resources necessary to implement their critical infrastructure protection

plans. Short-term Special Temporary Authority (STA) does not provide the regulatory and logistical certainty that is necessary to plan, commit resources, and deploy infrastructure surveillance and protection on a long-term basis.

In addition to licenses that have already been granted, these superior Part 90-licensed solutions within 3100-3300 MHz are being actively pursued for many additional new long-term infrastructure protection deployments throughout the critical infrastructure sectors defined by DHS. Dynetics is currently engaged with 98 entities across the United States - in nearly every one of the 16 DHS sectors - who are either in their early (i.e., corporate planning/tech evaluation) or middle (i.e., capital planning/deployment) stages of their infrastructure protection roll-outs. These critical infrastructure operators are in many cases relying on the ability to promptly obtain long-term Part 90 Radiolocation Service licenses in the 3100-3300 MHz range once they have reached the appropriate phases of their infrastructure protection programs. These critical infrastructure operators are planning to license Part 90 Radiolocation Service products in the Lower 3 GHz Segment for over 250 site locations.

The Freeze immediately thrusted into chaos the long-term licensing and infrastructure protection plans of those critical infrastructure operators who plan to achieve successful infrastructure protection by obtaining authorization for Part 90 Radiolocation Service operations in the Lower 3 GHz Segment. Non-compliance with express regulatory milestones and infrastructure protection deadlines can result in significant enforcement action and/or penalties to those operators subject to such requirements. More importantly, the inability to readily incorporate licensed Part 90 radiolocation technologies in the lower portion of the 3 GHz band simply renders these entities more vulnerable to intrusion and attack, which places the physical and economic security of the nation at increased risk.

Although these impacts are all certainly unintended, unique and unusual consequences of the Freeze, they are nonetheless very severe and continuing to impose the Freeze in the face of such consequences is plainly contrary to the public interest. Long-term protection of critical infrastructure operations is not optional, nor is it subject to postponement, delay or "alternatives." These licensed systems are essential components of the complex long-term planning process. The potential consequences, therefore, of prohibiting the limited licensing requested herein are well beyond "unduly burdensome." Rather, the consequences could be devastating and involve danger to property, human life, and homeland security. From the moment of its inception, it is clear that the Freeze has placed critical infrastructure operators, and the security of our nation's critical infrastructure, at greater risk with no reasonable alternatives. For these reasons, and because the very limited scope of the requested waiver will not undermine the policy underlying the Freeze, Dynetics seeks expedited grant of the requested waiver.

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| Dynetics, Inc. Request For Limited Waiver of Temporary Freeze on Non-Federal Applications in the 3100-3550 MHz Band | ) | WT Docket No. 19-39 |

***WAIVER—EXPEDITED ACTION REQUESTED***

**REQUEST FOR LIMITED WAIVER**

Dynetics, Inc. ("Dynetics"), by its attorneys and pursuant to Sections 1.3 and 1.925 of the Commission's Rules,[1] in order to mitigate the risk of increased attack on the nation's critical infrastructure facilities, hereby requests expedited grant of a limited waiver of the Commission's freeze ("Freeze") on the acceptance and processing of applications for new or expanded Part 90 Radiolocation Service operations in the 3100-3550 MHz frequency band.[2]

As set forth herein, to reverse the severe unintended impact of the Freeze with respect to the ongoing deployment of technologically-superior Part 90 Radiolocation Service solutions in the lower 3 GHz band (i.e., 3100-3300 MHz – the "Lower 3 GHz Segment"), Dynetics seeks Commission grant of a limited and very narrowly-tailored waiver of the Freeze to permit the filing, processing and grant of Part 90 Radiolocation Service applications for new and modified facilities in the Lower 3 GHz Segment, with such applications restricted to the following parameters:

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[1] 47 C.F.R. §§ 1.3 and 1.925.

[2] *Temporary Freeze on Non-Federal Applications in the 3100-3550 MHz Band*, WT Docket No. 19-39 (DA 19-105), rel. February 22, 2019 ("Freeze Notice").

- Eligible applicants shall be limited exclusively to operators of facilities within the 16 critical infrastructure sectors defined by the United States Department of Homeland Security National Infrastructure Protection Plan,[3] and the purpose of the operations must be solely to support infrastructure surveillance and protection.

- The requested transmissions must originate solely within the property of the owner/operator of such critical infrastructure operations, and must be ground-based operations (not airborne).

- Such applications must request only discrete carrier frequencies within 3100-3300 MHz and the occupied bandwidth of such emissions must not extend outside such range.

- Such applications must request authority for no more than 6 discrete carrier frequencies per licensed location.

- In addition, Dynetics proposes that the "Conditions" listed at Section IV(D) herein be imposed in connection with the grant of such waiver. [4]

## I. United States Homeland Security Policy Demands Reliable Long-Term Protection Of Critical Infrastructure Operations Including The Deployment Of Commission-Licensed Part 90 Radiolocation Technology Where Appropriate

Well before the September 11 attacks, it had "long been the policy of the United States to assure the continuity and viability of critical infrastructures" such as "telecommunications, energy, banking and finance, transportation, water systems and emergency services, both governmental and private."[5]

Post 9-11, it became painfully evident that "there is critical infrastructure so vital that its incapacitation, exploitation, or destruction, through terrorist attack, could have a debilitating

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[3] See National Infrastructure Protection Plan (NIPP) 2013: Partnering for Critical Infrastructure Security and Resilience, United States Department of Homeland Security (accessed at https://www.dhs.gov/sites/default/files/publications/national-infrastructure-protection-plan-2013-508.pdf) (the "NIPP 2013").

[4] The Commission's Rules provide: "Requests for waiver of rules associated with licenses or applications in the Wireless Radio Services must be filed on FCC Form 601, 603, or 605." 47 C.F.R. §1.925(b)(1). If the Commission deems that rule applicable to this Request, then Dynetics seeks leave to file in the present pleading form to address the broader issues presented herein. In a separate filing submitted pursuant to 47 C.F.R. § 1.4, Dynetics is also submitting a "Request For Modification Of Freeze", in which Dynetics asks that the Freeze be modified to apply only to the 3450-3550 MHz range in the event that this portion of the spectrum is the only portion currently under active consideration by NTIA for possible alternative use.

[5] Presidential Decision Directive/NSC-63, PDD-63, Sections I and II (May 22, 1998) (accessed at https://fas.org/irp/offdocs/pdd/pdd-63.htm).

effect on security and economic well-being."[6] More pointedly, such reinvigorated policy now requires the federal government to "work with critical infrastructure owners and operators" to "take proactive steps to manage risk and strengthen the security and resilience of the Nation's critical infrastructure".[7] Thus, a lynchpin to the successful implementation of this policy is federal agency support of private sector development of technologies and systems capable of providing reliable and effective security, surveillance and deterrence of threats to critical infrastructure, as repeatedly confirmed in these directives:

> "...strategic ***improvements in security*** can make it more difficult for attacks to succeed and can lessen the impact of attacks that may occur."[8]
>
> "Federal departments and agencies will identify, prioritize, and ***coordinate the protection of critical infrastructure and key resources in order to prevent, deter, and mitigate the effects*** of deliberate efforts to destroy, incapacitate, or exploit them."[9]
>
> "These efforts shall seek to reduce vulnerabilities, minimize consequences, ***identify and disrupt threats***..."[10]
>
> "The national effort to strengthen critical infrastructure security and resilience depends on ***the ability of public and private sector critical infrastructure owners and operators to make risk-informed decisions on the most effective solutions available*** when allocating limited resources in both steady-state and crisis operations. Therefore, ***risk management is the cornerstone of the National Plan***..."[11]
>
> The activities of the public/private partnership must include "[i]mplement[ing] ***intrusion detection or intrusion protection systems*** on sensitive or mission-critical networks and facilities to identify and prevent unauthorized access and exploitation."[12]

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[6] Homeland Security Presidential Directive/Hspd-7, "December 17, 2003, Section 4 ("HSPD-7") (accessed at: https://www.dhs.gov/homeland-security-presidential-directive-7).

[7] Presidential Policy Directive – PPD-21 -- Critical Infrastructure Security and Resilience, February 12, 2013, P.2 ("PPD-21") (accessed at https://www.dhs.gov/sites/default/files/publications/PPD-21-Critical-Infrastructure-and-Resilience-508.pdf).

[8] HSPD-7 at Section 5 (emphasis added).

[9] Id. at Section 8 (emphasis added).

[10] PPD-21 at 2 (emphasis added).

[11] See NIPP 2013 at 15 (emphasis added).

[12] Id. at 18.

Pursuant to the NIPP 2013 and its Annexes, sector-specific agencies,[13] the Commission,[14] and other agencies are charged with ensuring the protection of 16 well-defined critical infrastructure sectors.[15] Throughout these 16 sectors, the relevant agencies have established guidelines (and operators have also voluntarily imposed requirements) for the identification and performance of threat assessments, and for the development, approval, and implementation of security plans for critical infrastructure sites. In some cases, such action has occurred only after an attack demonstrated continued vulnerabilities. For example, in the early morning hours of April 16, 2013, a gunfire attack at Pacific Gas and Electric's Metcalf Substation near San Jose, CA damaged 17 transformers requiring over $15 million in repairs. The attack also impacted internet, cell, and 911 services in the area. Over 100 spent 7.62x39mm cartridges were later found along with approximately 52,000 gallons of oil which had leaked out of the damaged transformers causing them to overheat.[16] Rep. Henry Waxman, commenting on the incident, concluded "It is clear that the electric grid is not adequately protected from physical or cyber attacks..."[17] Following the Metcalf attack, the Federal Energy Regulatory Commission (FERC)

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[13] Id. at 11.

[14] See "Communications Sector-Specific Plan - An Annex to the NIPP 2013", United States Department of Homeland Security (2015) (accessed at: https://www.dhs.gov/sites/default/files/publications/nipp-ssp-communications-2015-508.pdf)

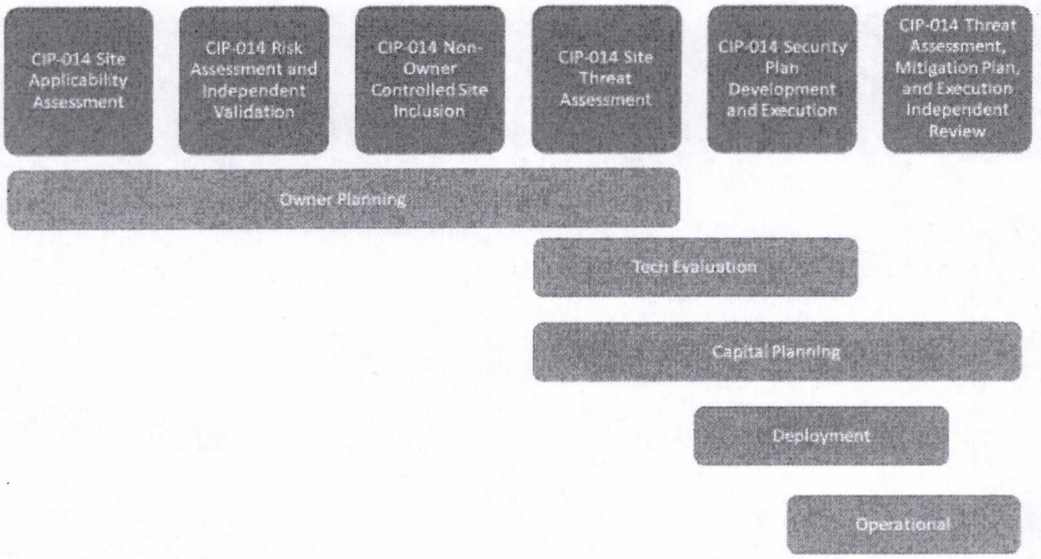
[15] The 16 critical infrastructure sectors defined by the NIPP 2013 are: Chemical; Commercial Facilities; Communications; Critical Manufacturing; Dams; Defense Industrial Base; Emergency Services; Energy; Financial Services; Food and Agriculture; Government Facilities; Healthcare and Public Health; Information Technology; Nuclear Reactors Materials, and Waste; Transportation Systems; Water and Wastewater Systems.

[16] "Sniper assault on US power station could have been the rehearsal for an 'even bigger terrorist attack', warns industry expert" Daily Mail.com, February 5, 2014 (accessed at:https://www.dailymail.co.uk/news/article-2552290/Sniper-assault-US-electricity-grid-rehearsal-bigger-terrorist-attack-warns-industry-expert.html)

[17] As quoted in "*'Military-Style' Raid on California Power Station Spooks U.S.*" Foreign Policy. December 27, 2013. Archived from the original on July 5, 2014 (accessed at: https://foreignpolicy.com/2013/12/27/military-style-raid-on-california-power-station-spooks-u-s/)

analyzed electrical grid vulnerability and ultimately approved infrastructure protection regulation CIP-014 in November of 2014.[18]

While critical infrastructure operators are subject to various regulatory and voluntary requirements that address the unique infrastructure protection requirements of their sectors, the common requirement for all such operators – regardless of sector – is the need to plan, evaluate and deploy their infrastructure protection plans on a long-term basis, often over a period of 5 years or more. Such complex long-term capital planning necessarily involves evaluating, designing and procuring effective security architecture components, committing to substantial internal infrastructure investments (e.g. fiber optics, power, mounting towers, poles, etc.), finalizing and approving plans, installing and integrating their systems, and obtaining the necessary permits and licenses required for the operation of such systems. For example, in the energy sector, the requirements of the CIP-014 physical security critical infrastructure regulation necessitate years of careful planning and typically comprises steps and milestones similar to the following:




[18] See *Physical Security Reliability Standard*, Order No. 802, 149 FERC ¶ 61,140, United States Federal Energy Regulatory Commission, Docket No. RM14-15-000 (Issued November 20, 2014) (accessed at: https://www.nerc.com/FilingsOrders/us/FERCOrdersRules/Final%20Rule%20on%20CIP-014-1.pdf).

Key among these complicated technical and logistical requirements is the assurance of – for many years in advance during planning and implementation - the unfettered ability to obtain Commission-issued licenses authorizing the operation of state-of-the-art radiolocation technologies for infrastructure surveillance and protection when such licenses are appropriate. While Commission licenses supporting these infrastructure plans may not be applied for and issued until the final installation of the system during the "operational" phase, decisions regarding radiolocation technologies must be made early on in the process and, once selected, such technologies become essential components of the multi-year planning and deployment process for these critical infrastructure protection systems.

## II. Commission-Licensed Part 90 Radiolocation Technology Within 3100-3300 MHz Provides Reliable Long-Term Protection of Critical Infrastructure Operations

As an integral part of their long-term infrastructure protection plans, critical infrastructure operators have for years actively licensed and deployed Commission-licensed radiolocation solutions within the Lower 3 GHz Segment for the purpose of infrastructure surveillance and protection.

From a technological perspective, radiolocation solutions within 3100-3300 MHz utilize specific propagation and atmospheric conditions unique to this frequency range, which result in fewer multipath propagation problems and fewer effects of clutter from rain, fog, and snow, as compared to higher frequency bands. Dynetics' GroundAware® system, for example, provides superior functionality in this frequency range. This system is a Commission-certified state-of-the art all-digital, web-based, low-power, pulsed, non-scanning, ground-based surveillance lower S-Band radar providing real-time situational awareness of property subject to intrusions by humans, vehicles, or animals. The system automates detection, target (intruder) classification, and deterrence of threats, thereby providing substantial efficiencies for large-scale high-risk sector operations that must simultaneously monitor and protect many sites and locations,

including sites that are geographically remote where law enforcement response times can be 30 minutes or more. Both variants of the GroundAware® system[19] can operate on any one of six discrete carrier frequencies spaced 15.625 MHz apart within 3100– 3300 MHz. When using the maximum emission bandwidth (32M6Q3N), the occupied bandwidth of such emissions is contained within this range when operating at the highest or lowest discrete carrier frequency. To date, Part 90 Radiolocation Service licenses for GroundAware® products have been issued in over fifty locations,[20] and to Dynetics' knowledge, no ten-year license applications for Part 90 Radiolocation Service operations in the 3100-3300 MHz have been denied or subject to material restrictions.

From a licensing perspective, once a radiolocation solution within 3100-3300 MHz has been chosen as the preferred solution, the long-term duration of Part 90 Radiolocation Service licenses (i.e., 10 years) is necessary in order to allow critical infrastructure applicants to realistically commit the resources necessary to implement their critical infrastructure protection plans. Short-term Special Temporary Authority (STA) does not provide the regulatory and logistical certainty that is necessary to plan, commit resources, and deploy infrastructure surveillance and protection on a long-term basis.

## III. Prohibiting Part 90 Radiolocation Licensing For New And Modified Operations Within 3100-3300 MHz Prevents Critical Infrastructure Operators From Continuing to Incorporate Such Technology Into Long-Term Infrastructure Protection Plans

Critical infrastructure operators are increasingly committing substantial resources to the deployment of long-term Commission-licensed Radiolocation Service solutions in the Lower 3

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[19] The GroundAware® product comprises two variants – omnidirectional and directional (azimuth). Both variants use one of two occupied bandwidths, 17.0 or 33.2 MHz, and pulse widths ranging from approximately 1,000 ns to 500 ns.

[20] See, e.g., WQXB761, WQXF469, WQXM465, WQZH276, WRAG713, WRAV674, WRBP708, WRCC829, WQXF629 WQXN422, WQWZ393 WQXJ432 WQZI582 WRAU277 WRAV708 WRCG718 WRCP841.

GHz Segment, in light of the technical advantages afforded by systems operating in that range. While these long-term Part 90 licenses are usually obtained towards the end of the infrastructure protection compliance process (i.e., when the security technologies become "operational"), the expectation of obtaining such licenses is nonetheless incorporated as an integral part of the infrastructure protection process throughout the early (i.e., corporate planning/tech evaluation) and middle (i.e., capital planning/deployment) compliance stages.

*The Energy and Transportation Sectors Have Already Included Part 90 Licensed Radiolocation within 3100-3300 MHz as an Integral Part of Their Long-term Infrastructure Protection Plans*

For several years, Alabama Power Company and Georgia Power Company have been licensing Part 90 radiolocation solutions within 3100-3300 MHz for the purpose of infrastructure surveillance and protection in fulfillment of various regulatory and voluntarily-imposed requirements, for their "operational" (i.e., installed) sites. To date, Alabama Power has been issued 8 licenses by the Commission, authorizing the operation of the Dynetics' GroundAware® system at 35 locations throughout Alabama.[21] Similarly, Georgia Power has been issued 7 licenses by the Commission, authorizing the operation of the Dynetics' GroundAware® system at 16 locations.[22] Additional licenses have been issued by the Commission for the surveillance and protection of the Denver International Airport.[23]

*Substantial Additional Part 90 Licensed Radiolocation within 3100-3300 MHz is Currently Being Planned and Implemented for Most Critical Infrastructure Protection Sectors*

More specific to this Request, these superior Part 90-licensed solutions within 3100-3300 MHz are being actively pursued for many additional new long-term infrastructure protection deployments throughout the critical infrastructure sectors defined by DHS. For example, it is Dynetics' understanding that at the time of the Commission's implementation of the Freeze,

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[21] See WQXB761, WQXF469, WQXM465, WQZH276, WRAG713, WRAV674, WRBP708, WRCC829.

[22] See WQWZ393, WQXJ432, WQZI582, WRAU277, WRAV708, WRCG718, WRCP841.

Alabama Power was preparing to file additional Part 90 Radiolocation Service applications for operation within the Lower 3 GHz Segment for the purpose of infrastructure surveillance and protection at additional sites, and its long-term plans included the filing of a number of additional similar applications. In addition, future deployment of Commission-licensed Part 90 Radiolocation Service operations in the Lower 3 GHz Segment is expected to be a key component of critical infrastructure protection across the country, within each of the DHS critical infrastructure sectors. In this regard, Dynetics is currently engaged with 98 entities across the United States - in nearly every one of the 16 DHS sectors - who are either in their early (i.e., corporate planning/tech evaluation) or middle (i.e., capital planning/deployment) stages of their infrastructure protection roll-outs. These critical infrastructure operators are in many cases relying on the ability to promptly obtain long-term Part 90 Radiolocation Service licenses in the 3100-3300 MHz range once they have reached the appropriate phases of their infrastructure protection programs. Based on Dynetics' work with these entities to date, these critical infrastructure operators are planning to license Part 90 Radiolocation Service products in the Lower 3 GHz Segment for over 250 site locations once they reach the installation or "operational" phase for such sites.

In light of the above, it is clear that substantial resources have already been committed to the deployment of Part 90 Radiolocation Service products for operation within 3100-3300 MHz, and more applications will be filed in the foreseeable future. Despite these ongoing developments – which are in full accord with the NIPP 2013 and related regulatory and industry efforts – the Freeze has – from the very moment of its issuance – completely halted any such further deployment or planning with respect to a technology that provides proven and significant technological advantages. As discussed herein, the public interest demands that a limited waiver

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[23] See WQXF629, WQXN422.

of the Freeze be granted to permit long-term Commission-licensed solutions in the 3100-3300 MHz range to continue to be deployed for the purpose of infrastructure surveillance and protection.

**IV. Request For Waiver**

To ensure the continued ability of critical infrastructure operators to incorporate technologically-superior solutions into their long-term infrastructure protection plans, and thus to mitigate the risk of increased attack on the security of the United States, Dynetics seeks expedited action for a grant of a narrowly-tailored, limited waiver of the Freeze to permit the filing, processing and grant of Part 90 Radiolocation Service applications for new and modified non-STA operations in the Lower 3 GHz Segment, with such applications restricted to the following parameters:

- Eligible applicants shall be limited exclusively to operators of facilities within the 16 critical infrastructure sectors defined in the NIPP 2013, and the purpose of the operations must be solely to support infrastructure surveillance and protection.
- The requested transmissions must originate solely within the property of the owner/operator of such critical infrastructure operations, and must be ground-based operations (not airborne).
- Such applications must request only discrete carrier frequencies within 3100-3300 MHz and the occupied bandwidth of such emissions must not extend outside such range.[24]
- Such applications must request authority for no more than 6 discrete carrier frequencies per licensed location.
- In addition, Dynetics proposes that the "Conditions" listed at Section IV(D) herein be imposed in connection with the grant of such waiver.

[24] For example, as described above, operation of the GroundAware® system is limited to six discrete carrier frequencies spaced 15.625 MHz apart within 3100– 3300 MHz (i.e., 3148.4375 MHz, 3164.0625 MHz, 3179.6875 MHz, 3195.3125 MHz, 3210.9375 MHz, and 3226.5625 MHz). When operating with 32M6Q3N at the highest carrier frequency (3226.5625 MHz), the upper end of the occupied bandwidth is 3242.8625 MHz. When operating with 32M6Q3N at the lowest carrier frequency (3148.4375 MHz), the lower end of the occupied bandwidth is 3132.1375 MHz. Therefore, if an applicant sought to authorize operation of the GroundAware® system pursuant to the waiver requested herein, its application would result in minimal spectral impact to the Lower 3 GHz Segment because only these discrete carrier frequencies could be requested.

Requests for waiver of the Commission's rules will be granted where either: "(i) The underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest; or (ii) In view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative."[25] As demonstrated herein, grant of the requested waiver meets each of these standards.

### A. The Requested Waiver Is Narrowly Tailored To Address The Unique Circumstances And Long-Term Deployment Requirements Associated With Critical Infrastructure Protection

As demonstrated above, critical infrastructure operators are subject to unique long-term planning requirements and they must incorporate - early on in such processes – a plan to reliably and consistently deploy Commission-licensed radiolocation facilities using the most effective technologies available. In response to such unique requirements, Part 90 licensing of radiolocation facilities in the 3100-3300 MHz range for the purpose of infrastructure surveillance and protection has been ongoing for several years, and continued additional deployment is planned throughout each of the DHS critical infrastructure sectors, all of which is clearly consistent with homeland security policy and the public interest. Despite these ongoing, diligent efforts, the Freeze immediately thrusted into chaos the long-term licensing and infrastructure protection plans of those critical infrastructure operators who plan to achieve successful infrastructure protection by obtaining authorization for Part 90 Radiolocation Service operations in the Lower 3 GHz Segment.

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[25] 47 C.F.R. §1.925(b)(3)(i),(ii). Similarly, the Commission has authority to grant a waiver under Section 1.3 of the Rules if good cause is demonstrated. 47 C.F.R. § 1.3. See also *ICO Global Communications (Holdings) Limited v. FCC*, 428 F.3d 264 (D.C. Cir. 2005); *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164 (D.C. Cir. 1990); WAIT Radio v. FCC, 418 F.2d 1153 (D.C. Cir. 1969). Good cause may exist "where particular facts would make strict compliance inconsistent with the public interest." *Northeast Cellular*, 897 F.2d at 1166; see also *ICO Global Communications*, 428 F.3d at 269 (quoting Northeast Cellular); *WAIT Radio*, 418 F.2d at 1157-59.

For example, as explained above, at precisely the moment the Freeze was imposed by the Commission, it is Dynetics' understanding that Alabama Power was preparing to file additional applications for such long-term operations in the Lower 3 GHz Segment, and now such urgently-required deployments are prohibited. In addition, for those nearly 100 critical infrastructure operators who are currently engaged with Dynetics and who are in various phases of their multi-year infrastructure protection compliance programs (and for other operators that will soon be exploring the benefits of 3 GHz radiolocation solutions for infrastructure protection), the Freeze has in a single moment's notice threatened to deny their ability to continue to incorporate such technologies into their plans, and to license such technologies on a long-term basis, as is required to successfully implement such plans.

Non-compliance with express regulatory milestones and infrastructure protection deadlines can result in significant enforcement action and/or penalties to those operators subject to such requirements. Specifically, the EPAct of 2005 granted the Federal Energy Regulatory Commission authority to levy penalties for violations of the Federal Power Act up to $1 million dollars per violation for each day that the violation continues.[26] As recently as January 2019, a $10M fine was levied against an unidentified utility for violations of critical infrastructure protection standards.[27] More importantly, for all critical infrastructure operators (even those where requirements/sites are self-identified or voluntarily imposed), the inability to readily incorporate licensed Part 90 radiolocation technologies in the lower portion of the 3 GHz band simply renders these entities more vulnerable to intrusion and attack, which places the physical and economic security of the nation at increased risk.

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[26] See, e.g., "Civil Penalties", Federal Energy Regulatory Commission (accessed at: https://www.ferc.gov/enforcement/civil-penalties.asp - Updated December 3, 2015); *Penalties reach as high as $1 million per day for FERC violations*, Industry Safety and Hygiene News, November 12, 2013 (accessed at: https://www.ishn.com/articles/97315-penalties-reach-as-high-as-1-million-per-day-for-ferc-violations).

[27] *NERC Issues $10M Fine for Security Lapses*, RTO Insider, January 31, 2019 (accessed

Although these impacts are all certainly unintended, unique and unusual consequences of the Freeze, they are nonetheless very severe and continuing to impose the Freeze in the face of such consequences is plainly contrary to the public interest. Preventing critical infrastructure operators from continued access to these technological advantages, and thereby negatively impacting their ability to seamlessly implement their long-term infrastructure protection plans, is inconsistent with the unambiguous policy of the United States, which confirms that "[p]roactive and coordinated efforts are necessary to strengthen and maintain secure, functioning, and resilient critical infrastructure – including assets, networks, and systems – that are vital to public confidence and the Nation's safety, prosperity, and well-being."[28]

When appropriate in unique circumstances such as the present case, the Commission has taken action to protect the safety and activities of high-risk industrial and critical infrastructure operators.[29] Indeed, even within the last week, with respect to an Executive Order addressing the protection of information and communications technology and services against foreign entities which in part requires mitigation of transactions that "pose[] an undue risk of catastrophic effects on the security or resiliency of United States critical infrastructure or the digital economy of the United States",[30] Chairman Pai unambiguously confirmed that "[w]hen it comes to our national

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at:https://www.rtoinsider.com/nerc-fine-cip-110221/).

[28] PPD-21, Introduction.

[29] See e.g., *In the Matter of Flint Hill Resources Pine Bend, LLC - Request for Waiver to License UHF Public Safety Channels in Minnesota*, Order, DA 19-67, WTB (rel. 2/8/2019) (granting waiver to permit operation on Public Safety Pool channels because "[r]eliable communication is essential for critical infrastructure industry entities" like the applicant); *In the Matter of ReconRobotics, Inc., Request for Waiver of Part 90 of the Commission's Rules*, Order, WP Docket No. 08-63, WTB and PS&HSB (rel. February 23, 2010) (granting waiver to permit equipment authorization and customer licensing under Part 90 to support the activities of state and local police and firefighters and security personnel in critical infrastructure industries); *In the Matter of The 4.9 GHz Band Transferred from Federal Government Use*, Order, WT Docket No. 00-32 (rel. August 2, 2004) (granting stay of rules in order to avoid "the unintended consequence of adversely affecting public safety and critical infrastructure operations…")

[30] Executive Order on Securing the Information and Communications Technology and Services Supply Chain, Issued May 15, 2019 (accessed at https://www.whitehouse.gov/presidential-actions/executive-order-securing-information-communications-technology-services-supply-chain/).

security, we cannot afford to make risky choices and just hope for the best."[31] Grant of the limited waiver as specified in this Request will proactively serve the same national priorities and protect a similar limited class of operators from experiencing significant, albeit unintentional, consequences that continue every day to result from the Freeze.

### B. The Requested Waiver Will Mitigate The Risk Of Potentially Devastating Impact To Critical Infrastructure Operators Who Must Ensure Reliable And Long-Term Protection Of Their Facilities Using Superior Technologies

Reliable, efficient, cost-effective and long-term protection of critical infrastructure operations is not optional, nor is it subject to postponement, delay or "alternatives." Either such facilities are monitored 24 hours per day / 7 days per week with automated technology that provides real-time situational awareness, or they are at significant increased risk of intrusion/attack and subject to enforcement action or other penalties for non-compliance with applicable law. Critical infrastructure operators must identify, very early in the planning process, technologies that can be deployed on a prompt, consistent and long-term basis. Such systems, once identified, become an essential component of the complex long-term planning process that must be employed by any critical infrastructure operator.

Dynetics' GroundAware® system, for example, provides the unique benefit of automated detection, target (intruder) classification, and deterrence of threats, which is a substantial improvement from legacy technologies and one of the reasons for its increasing interest and deployment by critical infrastructure operators. This system provides actionable information, mobile alerts, and integrated intrusion-event live video to owner/operators – all via a single interface without requiring individuals continuously monitor video screens that would significantly increase personnel costs and lead to fatigue resulting in the possibility that some

[31] Press Release, "Chairman Pai Statement On Executive Order to Protect America's Communications Networks", May 15, 2019.

intrusions could be overlooked. Moreover, the radar greatly reduces the number of cameras needed to protect a facility and can detect intruders well beyond the range for most camera systems. With this "rich situational awareness," security stakeholders have the specific real-time information needed to instantaneously respond to threats as they happen in addition to event-logging and radar tracking playback for post-event investigations resulting in a more effective use of limited resources. While attempted security breaches at facilities are not commonly shared, even with vendors, Dynetics is aware that the GroundAware® system has deterred multiple attempted intrusions at electrical substation sites in recent months and was previously used effectively by law enforcement to interdict an intruder, and provide evidence for subsequent prosecution.

The GroundAware® system has proven itself to be reliable and effective not only from a functional standpoint, but also with respect to the ten year Part 90 licensing process. As noted above, to Dynetics' knowledge, no ten year license applications for Part 90 Radiolocation Service operations in the 3100-3300 MHz have been denied or subject to material restrictions. These long-term licenses, and the expectation of the critical infrastructure community that such long-term licenses will be readily available, are integral to the long-term infrastructure protection plans of these operators. Although the Commission in its Public Notice permitted the filing of applications for special temporary authority for "short-term" operations,[32] STA is simply not a viable licensing option for critical infrastructure operators who must view infrastructure protection in the long-term.

The Freeze, as currently imposed, completely prohibits additional new long-term licensing of technology that provides the unique benefits of 3 GHz automated web-based detection, classification, and deterrence necessary to ensure long-term infrastructure protection.

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[32] Freeze Notice at 3.

While certainly this places critical infrastructure at an increased risk of enforcement action, the situation is much more serious because the Freeze subjects critical infrastructure and therefore the security of the nation to an increased risk of attack. The potential consequences, therefore, of prohibiting the limited licensing requested herein are well beyond "unduly burdensome." Rather, the consequences could be devastating and involve danger to property, human life, and homeland security. From the moment of its inception, it is clear that the Freeze has placed critical infrastructure operators, and the security of our nation's critical infrastructure, at greater risk with no reasonable alternatives. For this reason, Dynetics seeks expedited grant of the requested waiver.

### C. The Very Limited Scope Of The Requested Waiver Will Not Undermine The Policy Underlying The Freeze

Above, Dynetics has demonstrated that a limited waiver is warranted "in view of unique or unusual factual circumstances of the instant case [because] application of the [Freeze] would be inequitable, unduly burdensome or contrary to the public interest, [and critical infrastructure operators have] no reasonable alternative."[33] Accordingly, the Commission can and should grant the requested waiver based on that standard alone.

Further grounds for waiver may very well exist pursuant to the separate additional standard in the Commission's rules, because the "underlying purpose of the [Freeze] would not be served or would be frustrated by application to the instant case, and … grant of the requested waiver would be in the public interest".[34] In this regard, in issuing the Freeze, the policy of the Commission was clear – namely to "maintain a stable spectral environment ***in a band that is under active consideration*** for possible alternative use."[35] While months ago it was

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[33] 47 C.F.R. §1.925(b)(3)(ii).

[34] Id at §1.925(b)(3)(i).

[35] Freeze Notice at 2 (emphasis added).

understandable to assume that NTIA's active consideration of alternative use under the MOBILE NOW Act might remain open to the full 3100-3550 MHz frequency range through the March 2020 report deadline, there is no indication at all that NTIA has identified frequencies for alternative use beyond the limited 3450-3550 MHz frequency range ever since NTIA identified this range in February 2018,[36] and similarly there is no indication at all that NTIA is even actively considering the 3100-3450 MHz range for alternative use at this point for inclusion in the report due in March 2020. Assuming this is indeed the status of NTIA's review, then (i) the 3100-3300 MHz range would not in fact be under "active consideration" by NTIA for possible alternative use; (ii) any additional grants of new or modified Part 90 Radiolocation Service applications within 3100-3300 MHz pursuant to the waiver requested herein would not impact the spectrum (3450-3550 MHz) currently being considered by NTIA for alternative use; and (iii) the Commission can and should grant the requested waiver on this additional ground because grant of the requested waiver for applications within 3100-3300 MHz would not undermine the policy underlying the issuance of the Freeze.[37]

In any event, any limited additional licensing within 3100-3300 MHz that may occur pursuant to the waiver requested herein would not have an adverse impact on the spectral environment in that range. For example, the consistent success with respect to prior installation and operation of GroundAware® in over 50 locations to date suggests that actual harmful

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[36] "NTIA Identifies 3450-3550 MHz for Study as Potential Band for Wireless Broadband Use", David J. Redl (Feb. 26, 2018).

[37] If indeed NTIA's current active review of alternative use spectrum in the 3 GHz band pursuant to the MOBILE NOW Act is exclusively limited to the 3450-3550 MHz range, then the Commission could decide to grant the waiver not only for the limited Lower 3 GHz Segment specified herein, but for the entire range of 3100-3450 MHz. However, in the interest of presenting this request for waiver in terms that are as narrowly-tailored as possible, Dynetics seeks a waiver only with respect to applications filed for authority within the Lower 3 GHz Segment. Because this Request is narrowly-tailored to ensure that a very specific category of users – critical infrastructure operators – are permitted to continue implementing their long-term infrastructure protection plans in furtherance of United States homeland security policy, and because the need for such long-term licensing is established, ongoing and non-discretionary, the applications filed by critical infrastructure operators for the purpose of infrastructure surveillance and protection pursuant to the requested waiver would not fall under the category of "speculative

interference to both federal and non-federal radiolocation systems will not occur, and because the operating (carrier) frequency of these radars can be selected from among six available channels in the Lower 3 GHz Segment any such operations can flexibly accommodate interoperability with existing co-channel systems or future deployments. Further, the confined deployment (limited to the applicant's property) proposed in this Request will further minimize even the theoretical risk of impact to existing co-channel systems or future deployments. In addition, Dynetics is not aware of any issues or objections that have been raised in connection with any prior applications for licensing of the GroundAware® system, and such systems are, in any event secondary to federal radiolocation operations.[38] Finally, the extremely limited scope of the requested waiver (i.e., limited to critical infrastructure operators solely to support ground-based infrastructure surveillance and protection, applications must request discrete carrier frequencies contained only within 3100-3300 MHz, applications limited to no more than 6 discrete carrier frequencies per licensed location) will help ensure that the impact of this additional licensing will be negligible.

**D. Additional Proposed Conditions**

In order to further narrowly tailor the scope of the operations for which waiver is sought, Dynetics proposes the following additional conditions to be applied to the waiver requested herein:

- The manufacturer of any devices operating under this waiver must inform purchasers of such devices that such operation is subject to the terms and conditions specified in the Commission's waiver grant.
- Applications seeking authorization pursuant to the Commission's waiver grant must reference the Commission's Order by document number, and must demonstrate that the proposed operations fulfill the conditions of the waiver grant.

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applications" the Commission sought to prevent by imposing the Freeze.

[38] 47 C.F.R. § 90.103(c)(12)

- Any devices operating under the waiver must be certified by the Commission, and must comply with the terms of such certification as well as all other technical and operational requirements applicable to Part 90 Radiolocation systems.

- The manufacturer of any devices operating under this waiver must notify the Commission of any instances of interference that it is made aware of and how the interference was remedied. Such manufacturer must also create and maintain a record of installations of all devices operating under the waiver, including the identity of the customer, call signs, type of location, street address and/or coordinates, and equipment model number. This list shall be made available to the Commission and/or to NTIA upon request.

## V. Conclusion

For the foregoing reasons, Dynetics hereby requests expedited grant of a limited waiver of the Freeze pursuant to the terms and conditions set forth herein.

Respectfully submitted,

**DYNETICS, INC.**

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