

# Statement of Commitment to Utilize the National Oceanographic and Atmospheric Association (NOAA) Data Collection System (DCS) Data Collection Platform Commanding (DCPC) Capability

- PURPOSE:** This document is provided to current or prospective users of the NOAA provided DCS system to signal their commitment to operationally use DCPC capability, when provided by NOAA.
- BACKGROUND:** GOES East and West have a latent capability to send Ultra High Frequency (UHF) signals to the terrestrial footprint of each satellite. In the past this capability was used to interrogate Data Collection Platforms (DCPs) in order to elicit an unscheduled environmental report or other purposes. This capability has been non-functional for a significant period of time. Recently, growth of GOES DCS users/DCPs and user interest has convinced the GOES DCS Program to restore this capability to meet GOES DCS system management requirements and support user community requests. The GOES DCS Program has conducted studies and tests over several years that indicate DCPC is a viable capability to conduct remote configuration changes to DCPs. NOAA intends to implement DCPC on GOES DCS for the remaining lifecycle of the system (~2034) and it is included in the Geostationary Extended Operations (GeoXO) satellites planned for operations after GOES.
- DISCUSSION:** NOAA has invested in and tested sustainment enhancements to the GOES DCS for the purpose of commanding DCPs. However, NOAA can only provide one portion of the total capability necessary to implement this capability. In order to reach full potential, DCPs with DCPC capability must be developed and users must invest resources to employ those DCPs. There remain a number of key development decisions for both the GOES DCS and DCPC design. One constraint is that complex encryption is not a planned feature of DCPC. System design, system operation, protection of platform identification, and modulation strategies can be employed to improve security.  
  
There are long-term implications for DCPC following the GOES lifecycle. The next generation of geostationary satellites, GeoXO, currently included the DCPC transponder in the baseline capability design. However, if DCPC is not restored or if there is not significant user commitment prior to final design review (estimate 2025) there may not be sufficient justification to retain DCPC on GeoXO. Therefore, NOAA requests that users signal their commitment to DCPC and provide as much detail information as they can reasonably share about projected system usage as soon as possible.
- NOAA GOES DCS STATEMENT OF INTENT:** NOAA GOES DCS intends to restore a DCPC capability on the existing GOES DCS that will allow remote configuration changes of DCPs, including the computing and radio telemetry IT infrastructure, to send commands and receive command acknowledgement. GOES DCS also intends to work with stakeholders to develop communication protocols, specifications, and conduct other development efforts. NOAA intends to include DCPC on the GeoXO satellite constellation if users have committed to DCPC use to the degree that the return on investment is clearly defensible, qualitatively and quantitatively, at the GeoXO final design review.

## 5. ORGANIZATION STATEMENT OF INTENT:

As a representative of an organization that uses, or intends to use, DCPC on GOES DCS and GeoXO DCS, when provided by NOAA, I state my intent to employ DCPC on both systems.

My organization estimates we will deploy \_\_\_\_\_ DCPC capable receivers, pending availability of an external DCPC receiver and/or upgraded DCPC capable DCP, through the GOES-R era (now to approximately ~2032). We estimate we will maintain \_\_\_\_\_ DCPC capable DCPs and add an additional \_\_\_\_\_ capable DCPs in the first 5 years of GeoXO (~2032-2042). These are estimates only, subject to change, and only reflect an intent to utilize DCPC capability on our existing & planning DCP field contingent.

*These estimates and commitment are non-binding, do not obligate resources, and do not constitute an official agreement between my organization and NOAA.*

Name	Title	Organization	Date