



Opinions of the Ministry of Industry and  
Information Technology and 14 other  
departments on strengthening the  
capacity building of emergency  
communication in extreme scenarios,  
Ministry of Industry and Information Technology  
Lianxin Guan [2024] No. 256

In order to thoroughly implement the spirit of General Secretary Xi Jinping's important instructions on emergency management, disaster prevention, mitigation and relief, adapt to the higher requirements for emergency communications put forward by extreme scenarios and major security emergencies in the new era, further strengthen departmental linkage, form a joint work force, continue to promote the modernization of emergency communication capabilities, and accelerate the construction of a national emergency communication framework, the following opinions are put forward:

1. General requirements

Guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, fully implement the spirit of the 20th National Congress of the Communist Party of China and the 2nd and 3rd Plenary Sessions of the 20th CPC Central Committee, adhere to the overall national security concept, adhere to the people-centered, adhere to bottom-line thinking and limit thinking, focus on the construction of a national emergency communication framework, based on innovation and breakthrough technology and equipment, with reform and improvement of the working mechanism as the guarantee, and with the consolidation of the network foundation and the improvement of the ability to guarantee extreme conditions of circuit and power outage as the starting point, comprehensively improve the ability to respond to emergency communications in extreme scenarios. Effectively escort the construction of Chinese-style modernization.

By 2027, emergency communications will enter the fast lane of high-quality development, with breakthroughs in key technological innovations in the integration of air, space, ground and sea, effective supply of equipment suitable for extreme conditions, and continuous expansion of emergency communication services. The connection between supply and

demand of emergency communication is clear and smooth, the connection and coordination between departments are more efficient, and the emergency management reform of telecom enterprises is accelerated. The coverage level of communication networks in disaster-prone areas has been significantly improved, the resilience of communication networks has been effectively enhanced, and the coordination pattern of public and private networks has been basically formed. The command and early warning is intelligent and efficient, the team strength system is sound and powerful, the cross-regional support capability has been significantly improved, the grassroots basic guarantee communication capability has been basically established, and the support capability for extreme scenarios has been greatly improved.

## 2. Promote innovation and breakthroughs in emergency communications

(1) Promote breakthroughs in the application of emergency communication technology. Focus on new information and communication technologies, and support breakthroughs in key technologies of emergency communications through major national, ministerial and

provincial science and technology projects and key R&D plans. Promote the research and development of key technologies suitable for extreme scenarios, such as cross-operator emergency roaming, unmanned aerial vehicle (UAV) air communication, indoor positioning and navigation, and underground space signal enhancement, and accelerate the application of next-generation information and communication technologies such as artificial intelligence and communication big data, as well as security technologies, to meet the needs of modernization, upgrading and evolution of emergency communication capabilities. (The Ministry of Industry and Information Technology, the Ministry of Public Security, and the Ministry of Emergency Management are responsible in accordance with their duties and division of labor)

(2) Research and development and promotion of new emergency communication equipment. Facing extreme scenarios, formulate a list of key equipment research and development, and organize and carry out the unveiling of the leader. Make good use of various project channels, set up special subjects to support the development of high-end, new and applicable equipment for emergency communications. Focus on strengthening the development and promotion of

high-mobility equipment such as unmanned aerial carrier equipment, all-terrain vehicles, and high-altitude base stations, lightweight and portable equipment such as emergency private network fusion terminals, backpack base stations, and microwave/scattering communication equipment, equipment suitable for extreme conditions such as severe cold and dense forests, and easy-to-operate and high-reliability equipment that is more suitable for grassroots use. (The Ministry of Industry and Information Technology, the Ministry of Public Security, the Ministry of Emergency Management, and the State Fire and Rescue Administration are responsible in accordance with their duties and division of labor)

(三) 构建应急通信创新发展平台。产学研联合创建应急通信工程实验室和技术研发中心，加强基础和前沿理论研究。用好应急通信工程技术验证平台，强化实验测试，有力支撑新技术、新装备、新业务在应急通信领域的创新应用。组织制定应急通信标准体系，加强应急预警、网络抗毁、互联互通等标准研制。（工业和信息化部、应急管理部按职责分工负责）

(四) 推动应急通信产业生态繁荣。建设应急通信产业集群，打造具有核心技术优势的骨干企业。突出行业引领，发挥学会、联盟等行业组织作用，完善应急通信公共服务平台，发布指导性产品

目录，加快创新成果产业化和推广应用。（工业和信息化部、应急管理部按职责分工负责）

### 三、加快应急通信机制改革

（五）构建应急通信供需对接机制。完善应急通信供需对接机制，建立健全各突发事件应急处置部门和通信管理部门常态化沟通联络渠道，明确联络责任单位和联系方式，定期沟通需求。应急处置时，各相关部门向通信管理部门提出应急通信需求，通信管理部门组织通信行业及时响应、有效保障。（工业和信息化部、公安部、交通运输部、应急管理部、中国气象局、国家林草局、国家消防救援局按职责分工负责）

（六）健全应急通信协同保障机制。通信管理部门与应急、电力、地面和空中交通管理部门健全协同保障机制。强化能源保障协同，为重要通信设施、应急通信无人航空器、车辆装备提供优先电力等能源供应。强化运输保障协同，为应急通信队伍装备、运输车辆提供必要通行和物流保障，依据《无人驾驶航空器飞行管理暂行条例》开辟应急通信无人航空器快速审批绿色通道。强化力量投送协同，极端场景下将应急通信人员、装备作为首批力量响应出动，通过空中投送、地面徒步、摩托化机动等方式投送至受灾区域。

（中央空管办、国家发展改革委、工业和信息化部、公安部、交通运输部、应急管理部、国家能源局、中国民航局、国家消防救援局按职责分工负责）

（七）完善资源统筹信息共享机制。建立应急通信装备、队伍及易发“断路、断电、断网”高风险区域台账，完善急时电信企业间资源共用、互备及协同抢修机制，提升科学调度水平和应急处置效率。推动突发事件应急处置部门之间实现数据资源交换共享，及时通报交通、电力、通信网络运行情况以及灾害预警和响应行动等信息。（工业和信息化部、交通运输部、应急管理部、中国气象局、国家消防救援局、国家林草局按职责分工负责）

（八）推进电信企业管理制度改革。电信企业建立应急通信指挥机制，设立应急通信专门机构，统筹建设发展、运行维护、政企服务等部门资源力量做好应急通信工作，制定应急通信人员专项管理办法，优化评聘、评优、考核等制度，扩展应急通信从业人员职业发展通道。（工业和信息化部负责）

#### 四、夯实应急通信网络基础

（九）增强重点地区通信网络覆盖。持续加强全国通信网络建设，统筹利用公众通信网、专用通信网、卫星通信网，重点提升灾害多发易发地区、重点国有林区、边境地区、重要国省干线等的网络覆盖水平。推动卫星网与地面网的融合协同和统一调度，提升通信网络整体应急服务能力。（工业和信息化部、应急管理部、国家林草局按职责分工负责）

（十）提高通信网络抗毁韧性水平。开展通信网络抗毁能力普查评估工作，摸清通信网络抗灾底数，适度提升通信基础设施建设

标准，强化容灾抗毁要求。加强重要通信设施安全防护，强化通信网络架构保护、重要节点和数据的容灾备份，加快在易灾乡镇建设超级基站，全面增强通信网络抗毁韧性。（工业和信息化部负责）

（十一）建设专网通信支撑服务能力。构建符合应急实战需求、与公网互通的专用通信网，形成公专协同的应急通信网络能力体系。加快建设我国自主可控的全球卫星通信系统，充分利用甚小口径终端（VSAT）、天通、北斗、高通量、低轨星座等卫星通信资源，形成统一调度、高效供给和融合应用的天基应急通信能力。

（工业和信息化部、应急管理部、国家林草局、国家消防救援局按职责分工负责）

## 五、强化极端场景保障能力

（十二）增强应急通信指挥预警能力。升级国家通信网应急指挥调度系统，加强铁塔、通信、电力数据共享，强化数据分析、监测预警、决策研判、资源调度能力。完善电信企业指挥调度系统，支撑应急通信政企协同指挥调度。基于小区广播技术建强通信网预警信息传播能力，与国家突发事件预警信息发布系统对接，实现秒级、靶向、安全的预警信息发布。（工业和信息化部、中国气象局按职责分工负责）

（十三）提高应急通信区域保障能力。布局建设应急通信综合保障区域中心，集中储备装备物资，增强极端场景下跨域支援能力。加强各型应急通信无人航空器配备部署和规范管理，形成布局

合理、快速支援的空中保障能力。建强消防救援前突力量，综合运用摩托车、徒步前突、无人机通信平台、直升机空中投送、索降等方式，提升极端情况下协同保障能力。（工业和信息化部、公安部、应急管理部、国家消防救援局按职责分工负责）

（十四）提升通信保障队伍实战能力。完善应急通信保障队伍体系，面向多灾种和重点能力组建国家级专业队伍。依托国家综合性消防救援队伍组建国家、区域、省、市级应急指挥通信队伍，建设国家、省级应急通信联训基地。明确保障队伍装备配备标准，加强全地形车、卫星便携站、应急专网融合终端等装备配备。加强队伍培训、演练、比武、拉练，强化跨部门跨地区联演联训，提升极端场景下应急通信网络开通、公网抢通、专网构建等实战能力。

（工业和信息化部、公安部、应急管理部、国家消防救援局按职责分工负责）

（十五）加强基层保底应急通信能力。基层应急处置部门和基层应急救援队伍要强化天通卫星电话等通信装备配备，确保紧急情况指挥通信畅通。推动易灾乡镇、行政村、国有林场强化天通、北斗短报文、应急专网融合终端等小型、易用装备预置和维护。加强卫星站、卫星终端等通信设备在船舶、海上设施的配备，提高海上通信能力。（工业和信息化部、公安部、交通运输部、农业农村部、应急管理部、国家卫生健康委员会、中国气象局、国家林草局按职责分工负责）

## 六、保障措施

（十六）强化组织实施。各地有关部门要强化工作协同,将重点任务统筹纳入部门重点工作,细化落实举措。各电信企业要制定本企业应急通信能力发展规划,做好资源配套,强化任务落实。要加强政策宣贯解读,积极回应舆论和民众关切,提升社会对应急通信的科学理性认识。（各单位按职责分工负责）

（十七）强化制度建设。完善应急通信预案体系,完善部门和企业职责分工,细化保障流程,加强各级各类预案衔接,提高预案科学性和可操作性。加强交通、应急管理政策与应急通信管理政策的协同,加大对灾害多发易发地区政策倾斜力度。（工业和信息化部、公安部、交通运输部、应急管理部按职责分工负责）

（十八）强化资金投入。充分利用现有资金渠道,支撑极端场景应急通信能力建设各项任务,做好应急管理和应急通信项目统筹,对应急通信重大项目积极予以支持。电信企业每年要安排充分资金保障应急通信工作。（国家发展改革委、财政部按职责分工负责）

（十九）强化监督考核。加大考核力度,建立健全应急通信评价机制,研究出台工作评价标准,推动对电信企业积极参与应急通信保障支出的额外成本予以考核剔除处理,对在应急通信工作中表现积极、成绩突出的集体或个人按照国家有关规定给予荣誉奖励,激励参与应急通信工作的积极性和主动性。（工业和信息化部负责）

工业和信息化部

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应急管理部

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中国民用航空局

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