

Crowdfunding of Renewable Energy Projects - Survey of EU Citizens

D2.1: Market research on the public's attitude and perception regarding crowdfunding for RES projects (WP2; T2.1)

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CrowdFundRES

Unleashing the potential of Crowdfunding for Financing Renewable Energy Projects



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Table of contents

Technical references.....	2
Table of contents.....	4
List of Tables	5
Introduction and Context.....	6
Methodology.....	9
Analysis and Results.....	13
Respondent Familiarity	13
Scale of Prior Investment in Renewable Energy Projects	14
Future Intentions regarding Crowdfunding for Renewable Energy Projects	14
Factors Impacting on the Decision to Invest in Renewable Energy Projects	15
Crowdfunding Method Preferences	17
Crowdfunding as a Viable Alternative to Traditional Finance	19
The Perceived Benefits of Crowdfunding for Renewable Energy Projects	20
Constraints on Future Growth in Crowdfunding of Renewable Energy Projects	23
Perceptions Regarding the Future of Crowdfunding	24
Conclusions.....	27
References.....	29
Appendix.....	30
Appendix 1: Recruitment Plan	30
Appendix 2: Survey Questionnaire	32

List of Tables

Table 1: Response numbers	12
Table 2: Familiarity	13
Table 3: Investment scale	14
Table 4: Future intentions regarding renewable energy projects	15
Table 5: Factors taken into account in RES Investment Decisions	17
Table 6: Crowdfunding Method Preference for Investment in Renewable Energy Projects	19
Table 7: Crowdfunding as a Viable Alternative to Traditional Finance	20
Table 8: Benefits of Crowdfunding for Renewable Energy Projects.....	22
Table 9: Constraints on Growth in Crowdfunding for Renewable Energy Projects.....	24
Table 10: Is Crowdfunding Likely to Grow Over the Next Five Years?	25

Introduction and Context

Although much is known about the structure and role of the European crowdfunding market in general (see, e.g. Baeck et al., 2014; Wardrop et al., 2015), public attitudes regarding its role, operations and potential have not been explored in depth. A particular gap in knowledge exists regarding the way in which crowdfunding of renewable energy systems (RES) is viewed by the continent's citizens. One of the key aims of the CrowdFundRES project is to develop an understanding of public perceptions regarding this sector, including its aims, growth potential and challenges across Europe. This seems particularly timely given the combined effect of recent pressures on the crowdfunding market in general and European governments' apparent reduction in explicit and implicit support for the renewables sector.

This report presents the findings of an online survey of public perceptions of crowdfunding in the renewables sector, conducted in the second half of 2015 at the European level and in several languages. It is complemented by two further European level surveys undertaken concurrently by the CrowdFundRES consortium, one focused on crowdfunding platforms that are active in the renewables sector, the other focused on RES project developers. In conjunction, these three surveys present an up-to-date picture of the RES crowdfunding sector that will inform the next stages of the CrowdFundRES project and feed into the formulation of guideline insights for crowdfunding platforms and RES project developers to help unleash the potential of renewables crowdfunding in Europe. The results of the surveys should also contribute meaningfully to policy discussions at both national and European level.

The survey of the public was developed with the intention of exploring public perceptions regarding the use of crowdfunding for renewables, with a focus on perceived benefits, difficulties and potentialities. The questionnaire explores the views of the public whilst controlling for prior knowledge of/engagement with crowdfunding in general - and in the context of RES specifically - that might affect opinions. This design, and the manner of its analysis, enables differences in response according to background to emerge from the data and appropriate conclusions to be drawn. For example, this type of disaggregation facilitates examination of the extent to which opinions are influenced by prior experience of the use of crowdfunding in the renewables sector and other contexts.

Crowdfunding is part of the broader “alternative finance market” and involves (social media platform-based) raising of money from individual members of society who are brought together to provide the capital necessary for a specific investment project. The market in alternative project funding (i.e. outside the normal market for bank lending, traditional venture capital and security-market financing) has grown in the UK alone from £267m in 2012 to nearly £1.75bn in 2014 (Wardrop et al., 2015). Within this total, “equity-based” crowdfunding (where shares in a business are sold to investors in its early stages) grew in the UK over the same period by 410% to £84m, with an average amount raised of around £200k; “reward-based crowdfunding” (where individuals donate towards a specific project, with the expectation of a tangible, but non-financial, reward) grew in the UK by 206% to £26m, with an average amount raised of around £4k; and “donation-based” crowdfunding (where investors’ donations provide funding for a charitable project and no tangible

rewards are involved) grew in the UK by 77% to £2m, with an average amount raised of around £6k.

Whilst the UK continues to dominate the European crowdfunding market, figures for the rest of the EU have also grown for all three types: €120.33m was provided via reward-based crowdfunding in 2014, compared to €24m in 2012; €82.56m was provided via equity-based crowdfunding, compared with €18.4m in 2012; and €16.34m was provided via donation-based crowdfunding compared with €4.3m in 2012. However, and notwithstanding the significant sums noted above, both Baeck et al. and Wardrop et al. note the dominance of peer-to-peer lending over all other forms of alternative finance - £1.2bn (UK) and €368m (rest of the EU) respectively.

In the next section we outline the approach taken to survey design and methodology. This will be followed by an in-depth analysis of survey responses and a discussion of our findings, before we close with some more general remarks on the outcomes of this survey. A copy of the survey questionnaire is made available in the Appendix.

Methodology

Design of the CrowdFundRES survey of EU citizens was informed by study of prior survey work as available via Baeck et al. (2014), Wardrop et al. (2015), which was cross-checked against the pattern of responses obtained from members of the public via the European Commission (2014) crowdfunding consultation, and additional research undertaken by the Startup Europe crowdfunding initiative (cf. Alois 2014). A key pattern evident in this prior survey work, academic literature (e.g. Moritz et al. 2015) and consultations in the context of the aims of the CrowdFundRES project, relates to information asymmetries between members of the public as potential funders or investors, and the projects potentially supported by such means. A further insight relates to geographical focus, with France and Germany in particular generating high response rates, which ties up well with the selection of countries targeted in the CrowdFundRES project (Austria, Belgium, France, Germany, the Netherlands, and the UK). The reach of an online survey such as the one undertaken here will be wider and we have sought not to restrict it to particular geographies in the survey design, paying due recognition to the cross-border dimension in the EU of potential interest in crowdfunding.

An initial concept questionnaire was compiled during February and March 2015 through an iterative process led by the Dundee team and involving the lead partners of the other two surveys (ECN, WIP). This concept questionnaire, together with similar drafts from the other two surveys, was tested in moderated feedback sessions conducted at the first project workshop of the consortium in March 2015 to check for relevance of instruments among key stakeholder groups as represented

in the CrowdFundRES consortium. Structured feedback gathered from this workshop fed into pilot drafts of the English versions of the three questionnaires, which in turn were implemented by the University of Dundee via Survey Monkey. The distribution list involved leads generated through snowballing for volunteers through personal contacts of members of the consortium during April to check for semantic consistency through piloting over a two-week period during which 32 responses were received. Analysis suggested that only minor modifications were required and the public survey was then translated into Dutch, French and German and once more piloted for semantic consistency. Similarly, the developer survey was translated in May into French and German. The platform survey was administered in English only due to consistent feedback from the industry that English was the de-facto standard of communication in the platform sector and running several language versions alongside each other would risk alienating respondents who were used to significant levels of English-based surveying across the sector. The three surveys went live on 15th June 2015, and survey dissemination was vigorously pursued according to a strategically-oriented survey recruitment plan (Appendix 1).

All project partners (therefore representing academic institutions, law firms, crowdfunding platforms and renewable energy firms) disseminated the questionnaire via their social media networks to ensure that a reasonably knowledgeable sample of the European public would engage with the questionnaire. The evidence outlined below suggests that this aim was achieved; nearly 90% of those completing the survey indicated that they were aware of the crowdfunding concept, but this figure indicates that a meaningful number of responses were made by those without such an awareness, allowing appropriate comparisons to be made.

As Table 1 indicates, by the end of the survey period (30th November 2015), 478 responses had been received, 340 via the direct weblink to the Survey Monkey website and 138 via the embedded ECN weblink. However, several of those who logged into the survey did not complete any questions other than indicating a desired choice of language (the questionnaire was made available in Dutch, English, French and German) and indicating agreement with the terms and conditions. These responses were excluded from further analysis. As Table 1 shows, 21.3% of the 478 responses were removed from the sample on this basis, with the non-completion rates varying markedly from just 11.4% (for the Dutch version) to 23.0% (French).

The final useable sample comprised 376 responses, 153 in English, 94 in French, 90 in German and 39 in Dutch. Responses were received from 29 different countries, with the largest proportion of the sample coming from France (with 63 useable responses) followed by Germany and the Netherlands (29 each), Austria (28), Belgium and the UK (18 each) and Ireland (14). Although not shown in the table, the other demographic information collected also suggested a diverse base had been engaged, with 34% (66%) of respondents who provided the information being female (male); of those who provided the information, 1 respondent was aged under 18, 39 aged 18-25, 127 aged 26-45, 83 aged 46-67 and 5 aged over 68.

Table 1 - Response Numbers

	<i>WEBLINK</i>	<i>ECN EMBEDDED</i>	TOTAL	
Total number of responses	340	138	478	
Number of useable responses	270	106	376	
Non-completion rates by response language:				
	<i>Dutch</i> 11.4%	<i>English</i> 22.3%	<i>French</i> 23.0%	<i>German</i> 21.7%
Useable responses by language:				
	<i>Dutch</i> 39	<i>English</i> 153	<i>French</i> 94	<i>German</i> 90

Analysis and Results

Respondent Familiarity

The first part of the questionnaire enquired about respondents' experience and familiarity with crowdfunding in general and in the context of RES specifically. As Table 2 indicates, nearly 90% of respondents were familiar with the broad crowdfunding notion, 45% of whom had invested via such platforms previously, with half of these having invested specifically in RES projects on this basis. The number of crowdfunded RES projects previously undertaken by respondents is also shown in the table; most (26) had been involved in a single project, although 16 had invested in five or more.

Table 2 – Familiarity

88.5% (330) were familiar with crowdfunding	<i>of which:</i>
45.2% (149) had invested via crowdfunding	<i>of which:</i>
50.3% (75) had invested in RES via crowdfunding	<i>of which:</i>
26	had invested in 1 RES project
14	had invested in 2 RES projects
12	had invested in 3 RES projects
5	had invested in 4 RES projects
16	had invested in >5 RES projects

Note: RES = Renewable energy project

Scale of Prior Investment in Renewable Energy Projects

Table 3 documents the scale of the investments in RES made by respondents. The figures ranged from six investments of less than €100 to one investment of between €25,000 and €50,000. The most common range was €100 - €500, but the mean amount committed (based on mid-points) was €2454, suggesting that the typical engagement in RES by European citizens is on a non-trivial scale.

Table 3 – Investment Scale

Scale of most recent RES Crowdfunding investment (€):	Number of Respondents
<i>< 100</i>	6
<i>100 - 500</i>	27
<i>500 - 1000</i>	14
<i>1000 - 5000</i>	19
<i>5000 - 10000</i>	4
<i>10000 - 25000</i>	2
<i>25000 - 50000</i>	1
<i>>50000</i>	0

Note: RES = Renewable energy projects.

Future Intentions regarding Crowdfunding for Renewable Energy Projects

Having enquired about prior behaviour and practices regarding RES, the questionnaire next sought to explore respondents' future intentions, contextualised by their prior experience. Inspection of Table 4 indicates that 39% of the sample planned to invest in RES over the next three years, with the figure rising to 61% for those with prior experience of crowdfunding in general and to 82% for

those with CFRES experience. This pattern suggests that the extent of familiarity is linked with positivity when it comes to CFRES; such evidence is particularly encouraging in the light of continent-wide evidence of national governments reducing their commitment to the sector. Of particular note in this regard is the evidence that only 4% of respondents who had previously used crowdfunding in a RES context indicated that they did not intend doing so again over the next 36 months.

Table 4 – Future Intentions Regarding Renewable Energy Projects

Are you planning to invest in RES via crowdfunding in next 3 years?		
Yes: 39%	Maybe: 53%	No: 8%
Of those who have already invested via crowdfunding:		
Yes: 61%	Maybe: 34%	No: 5%
Of those who have already invested in RES via crowdfunding:		
Yes: 82%	Maybe: 13%	No: 4%

Factors Impacting on the Decision to Invest in Renewable Energy Projects

Table 5 reveals the wide range of factors taken into account when investment in renewable energy projects is considered. Inspection of the table reveals the diverse range of benefits perceived by the respondents, with eight factors being identified by more than 100 respondents. Amongst these, “Transparency” was, by some distance, the most often-cited (213 times) followed by “Sustainability impact” (174).

To check whether the responses reflect informed knowledge of the process, the proportionate figures generated only by those who intend to invest in CFRES over the next three years are also shown in Table 5. These provide a similar picture to that provided by the whole sample results, with Transparency highest at 79%. This evidence suggests that differences identified later in the study regarding the impact of prior CFRES experience on extant perspectives do not reflect fundamental differences in understanding of the practices and processes involved. Those completing the questionnaire were given the option to add additional comments in relation to this part of the survey and 38 responses were received. Whilst these covered a wide range of issues including project feasibility, tax status and governance, most related to the broad issue of community/environmental impact and ethics. In one case, the view was contextualised in terms of project financing as follows: “The social impact of the project would have a big influence on my decision – provided it made economic sense.”

Table 5 – Factors taken into account in RES Investment Decisions

Respondents taking particular factors into account in RES investment decisions		<i>Amongst those planning to invest in CFRES in next 3 years</i>
• Transparency	213	79%
• Sustainability impact	174	62%
• Investment model	163	61%
• Expected rate of return	159	66%
• Technology type	156	56%
• Developer reputation	132	47%
• Time frame (duration)	115	41%
• Geographic location	114	36%
• Info. in native language	84	33%
• A project in development	50	23%
• Existing op. project	47	17%
• Cross-border investment	29	10%
• Others	49	

Note: “Others” includes community impact, taxation, carbon consequences, technology track record. RES = renewable energy projects; CFRES = crowdfunding of renewable energy projects.

Crowdfunding Method Preferences

The questionnaire next explored opinions regarding the most appropriate crowdfunding method for RES investments. The five most-commonly identified methods in the broad crowdfunding literature (equity; reward; donation; debt in the form of bonds; and debt in the form of peer-to-peer lending) were employed and respondents asked to rank these in order of preference from 1 to 5 where 1 indicated the highest preference.

Inspection of Table 6 reveals the dominant role of equity, with an overall mean rank of 2.51 followed by peer-to-peer debt (2.82) and bond-based debt (3.03). The sub-group means shown in the table indicate some differences, with bonds generating a marginally higher average preference rank (2.51 v. 2.52) amongst those planning to invest in RES via crowdfunding. The popularity of bond-based

crowdfunding grew as the extent of familiarity grew, whilst the opposite pattern was evident for the donation-based method, which was least popular overall, but particularity amongst those who had previously invested in CFRES projects (average rank = 4.43).

The table also reveals the particular dominance of equity (and limited role for donations) in the UK. The average rank for the former amongst respondents based in the UK was just 2.31 (the strongest preference evident anywhere in the table), confirming for the first time that the pattern found for crowdfunding in general in the UK (Baeck et al., 2014; Wardrop et al., 2015) is specifically evidenced amongst RES. More generally, the apparent preference for equity-based crowdfunding over peer-to-peer lending suggests an idiosyncrasy in the RES sector of the crowdfunding market, as the aforementioned reports reveal that peer-to-peer arrangements dominate all other forms of crowdfunding in monetary terms. Thus, equity-based crowdfunding appears to be perceived as being particularly appropriate for funding investments in the RES sector.

The survey document allowed respondents to add additional comments regarding the issue of crowdfunding method preference and this yielded the highest number (89) of responses to any of the five fully open-ended parts of the questionnaire. It was clear from inspection of these that a wide range of issues is seen as relevant, including project risk, environmental impacts, cost implications, timescale, investment site (i.e. local or wider) and project size.

Table 6 – Crowdfunding Method Preference for Investment in Renewable Energy Projects (Average Ranks: 1 = highest; 5 = lowest)

	Equity-based	Debt-based (bonds)	Debt-based (p2p)	Reward-based	Donation-based
TOTAL	2.51	3.03	2.82	3.33	3.77
Familiar with CF	2.59	3.00	2.80	3.36	3.75
Invested via CF	2.43	2.89	2.56	3.36	4.11
Invested in RES via CF	2.53	2.54	2.41	3.44	4.43
Planning to invest in RES via CF	2.52	2.51	2.76	3.53	4.16
UK-based	2.31	2.65	2.88	3.14	4.23

RES = renewable energy projects; CFRES = crowdfunding of renewable energy projects.

Crowdfunding as a Viable Alternative to Traditional Finance

The survey document next sought out perspectives on the notion of whether crowdfunding represents a meaningful alternative to traditional financing methods going forward. Inspection of the relevant results in Table 7 suggests an overwhelmingly positive view of crowdfunding amongst EU citizens across Europe, with an overall mean response of 4.07. However, the data also provide the first indication that crowdfunding is seen as particularly appropriate for renewable energy projects, with the mean response in the latter case of 4.31 significantly higher than the figure for investments in general. The various sets of disaggregated findings suggest that this pattern holds irrespective of

respondents' prior experience of crowdfunding, with eight of the nine sub-group means being higher for investments in RES projects.

Table 7 – Crowdfunding as a Viable Alternative to Traditional Finance
(Average Responses: 5 = strongly agree; 1 = strongly disagree)

	Investments in RES	Investments in General	Diff.
TOTAL	4.31	4.07	0.24**

Familiar with CF:			
<i>yes</i>	4.33	4.11	
<i>(no)</i>	(4.12)	(3.83)	
Invested via CF:			
<i>yes</i>	4.42	4.20	
<i>(no)</i>	(4.23)	(3.99)	
Invested in RES via CF:			
<i>yes</i>	4.51	4.27	
<i>(no)</i>	(4.31)	(4.13)	
Planning to invest in RES:			
<i>yes</i>	4.64	4.25	
<i>(no)</i>	(3.75)	(3.90)	
<i>[maybe]</i>	[4.16]	[3.98]	

Notes: RES = renewable energy projects; CFRES = crowdfunding of renewable energy projects. A ** indicates a significant difference between the means at the 1% level.

The Perceived Benefits of Crowdfunding for Renewable Energy Projects

Table 8 provides evidence regarding the benefits of crowdfunding for RES perceived by EU citizens.

Inspection of the table suggests the key advantages are related to moral/ethical issues, where a

mean response of 4.38 resulted, followed by speed (mean = 4.04) suggesting that both hard and soft benefits respectively are amongst the important drivers of the optimism revealed elsewhere in this report.

In terms of the sub-sample results, disaggregation on the basis of planning/not planning to engage in RES via crowdfunding consistently drove the biggest differences in sub-group means. Those who were planning to take such action consistently generated the highest averages, indicating that those who intend to invest do so on the basis of a wide range of perceived benefits.

As it was clearly going to be impossible to list all the possible benefits of crowdfunding for RES via a closed-question with pre-specified responses, those completing the survey were given the option to add further questions. Seventy-three such responses were received. Whilst the responses revealed a wide range of possibilities - confirming much of the evidence underpinning Table 8 - the most commonly-cited advantages related to community involvement (including the sense of “ownership” provided by crowdfunding vehicles) and access to funds in cases where banks are simply not likely to provide the capital needed, i.e. “seed money”.

Table 8 – Benefits of Crowdfunding for Renewable Energy Projects
(Average Responses: 5 = strongly agree; 1 = strongly disagree)

	All	Familiar with CF	Invested via CF	Invested in RES via CF	Planning to invest in RES via CF
		<i>Yes (no)</i>	<i>Yes (no)</i>	<i>Yes (no)</i>	<i>Yes (No) (Maybe)</i>
Reduction in European public funding	3.36	3.34 (3.61)	3.37 (3.29)	3.20 (3.57)	3.38 (3.05) [3.39]
Decreases in European banks’ lending	3.65	3.63 (3.71)	3.72 (3.53)	3.76 (3.68)	3.78 (3.16) [3.62]
Speed of access to funds	4.00	3.99 (4.09)	3.97 (4.02)	4.02 (3.89)	4.21 (3.44) [3.95]
Low cost relative to traditional banks	3.79	3.81 (3.67)	3.78 (3.82)	3.72 (3.83)	3.93 (3.41) [3.75]
The morals and ethics of CF’s collaborative basis	4.32	4.35 (4.13)	4.38 (4.30)	4.41 (4.36)	4.53 (3.67) [4.29]

RES = renewable energy projects; CFRES = crowdfunding of renewable energy projects.

Constraints on Future Growth in Crowdfunding of Renewable Energy Projects

The next part of the survey enquired about the significance of three possible difficulties relating to crowdfunding for RES, namely: lack of investor knowledge; the small scale of the typical crowdfunding relative to RES needs; and the lack of regulation in the sector. The results reveal that there were no cases, including for any of the sub-groups, where the mean reached a value of 4. However, the highest overall average (3.71) was generated for the statement relating to investors' lack of knowledge about funding sources, a pattern consistent across all the disaggregations. This indicates that whilst the picture that emerges from this study as a whole is overwhelming positive, there is some residual concern about the way in which awareness of platform existence is disseminated.

As with the possible benefits of crowdfunding for RES, there was no likelihood of all the potential constraints on growth in the sector being articulated and specified in the survey. Respondents were therefore again given the chance to make additional open-ended comments, and 49 of the participants chose to engage in this way. A consistent theme in the views expressed related to the issue of lack of awareness and experience on the part of both platform providers and investors themselves, confirming the impression from the closed-end questions of this issue dominating any concerns about scale or sectoral regulation.

Table 9 – Constraints on Growth in Crowdfunding for Renewable Energy Projects

(Average Responses: 5 = strongly agree; 1 = strongly disagree)

	All	Familiar with CF	Invested via CF	Invested in RES via CF	Planning to invest in RES via CF
		<i>Yes (no)</i>	<i>Yes (no)</i>	<i>Yes (no)</i>	<i>Yes (no) [maybe]</i>
Investors' lack of knowledge about funding sources	3.71	3.71 (3.83)	3.65 (3.72)	3.68 (3.64)	3.65 (3.78) [3.75]
The small scale of typical CF relative to RES needs	3.09	3.10 (3.13)	3.04 (3.15)	3.02 (3.05)	3.01 (3.44) [3.10]
Lack of regulation in the CF sector	3.11	3.09 (3.18)	3.00 (3.19)	2.97 (3.05)	2.94 (3.06) [3.24]

Notes: RES = renewable energy projects; CFRES = crowdfunding of renewable energy projects.

Perceptions Regarding the Future of Crowdfunding

Having explored views regarding the explicit benefits and limitations of crowdfunding in a RES context, the questionnaire concluded by asking respondents to indicate the extent to which they believed that crowdfunding was likely to grow in the next five years, both in general and for RES projects specifically. Inspection of Table 10 reveals that growth in use of crowdfunding is widely predicted, although the mean score for the notion in a RES context (4.23) was significantly higher than for investments in general (4.08). This pattern was repeated in virtually all (eight out of nine) disaggregations of the data reflecting prior experience and familiarity, suggesting that optimism regarding crowdfunding – in a RES context in particular – is pervasive amongst EU citizens.

Table 10 – Is Crowdfunding Likely to Grow Over the Next Five Years?
(Average Responses: 5 = strongly agree; 1 = strongly disagree)

	Investments in RES	Investments in General	Diff.
TOTAL	4.23	4.08	0.15**
Familiar with CF: yes	4.24	4.10	
(no)	(4.17)	(3.92)	
Invested via CF: yes	4.46	4.22	
(no)	(4.02)	(3.97)	
Invested in RES via CF: yes (no)	4.55 (4.35)	4.26 (4.16)	
Planning to invest in RES: yes (no)	4.58 (3.44)	4.25 (3.79)	
[maybe]	[4.09]	[4.01]	

Notes: RES = renewable energy projects; CFRES = crowdfunding of renewable energy projects. A ** indicates a significant difference between the means at the 1% level

After completing this part of the survey, respondents were asked to offer any final observations and thoughts regarding crowdfunding and/or crowdfunding for RES, with 35 responses being made in this context. These revealed a range of points, including: concern over regulation; the need to “excite” the RES sector in the manner of Arts/Culture; the potential for the sector following the global banking crisis; the concern over the “niche” aspect of crowdfunding; lack of investor understanding; problems with government ideology; the need for decentralisation and scalability; the potential role of tax policy in developing the market; and issues concerning RES business plans. In 26 cases, those making comments also agreed to follow-up by the research team and so a sample of five cases where the views expressed seemed broadly representative of the full sample - but with the potential to benefit from further elucidation - were selected for further analysis. Two of those approached offered further direct comment. In one case, the respondent focussed on the potential

role of crowdfunding of RES in a developing country context given the small-scale (relative to normal corporate projects) of the funding, with the result being a “nicely-packaged solution” for emerging nations. The second respondent who provided additional comments made detailed representations concerning the adverse impacts of the replacement in the UK of the Financial Services Authority by the Financial Conduct Authority. The latter, in this individual’s opinion, was much less supportive of co-operative status being granted to energy projects. This comment suggests the need for caution and careful observation of regulatory bodies’ actions in the increasingly uncertain environment regarding governmental support of non-standard business funding models.

Conclusions

This study has provided the first detailed evidence regarding the EU public's perception of the role of crowdfunding as an investment vehicle for renewable energy projects (RES). The study yielded a sample of 389 usable responses, drawn from 29 nations. Follow-up investigation amongst a sample of those who agreed to such enquiry also took place. One of the most striking patterns in the data was that the results were broadly consistent irrespective of respondent background, i.e. familiarity with crowdfunding, and experience of it in general and for RES specifically.

In terms of the factors affecting the decision to undertake RES investments, transparency was, by some margin, the most frequently cited, followed by sustainability impact. Views in this regard were found to be similar irrespective of plans regarding the use of crowdfunding in a RES context, suggesting that differences in opinions across sub-groups of respondents evidenced elsewhere in the survey were not simply reflecting different understandings of the process itself.

As regards specific forms of crowdfunding, equity dominated as the type most likely to be employed in a RES context. Whilst this pattern was found across virtually all sub-groups, the strongest support for the method came from UK-based respondents. This finding provides the first evidence that a clear trend reported in the broader crowdfunding market is strongly evident in the RES sector specifically. Relatedly, the overwhelming dominance of peer-to-peer financing in the alternative financing s reported elsewhere does not appear to be reflected in the RES market, suggesting that the equity crowdfunding route is seen as being especially apposite for investment in renewables.

Notwithstanding the points noted above, the most important finding in this study is of robust cause for optimism regarding the future of crowdfunding for renewables. Five specific pieces of evidence in the study permit us to draw this conclusion:

- i. The propensity to invest in RES via crowdfunding was strongest amongst those with prior experience of this funding method, particularly in the RES context. This result indicates a favourable experiential basis for future such investment in the sector.
- ii. Crowdfunding was seen as more viable for RES than for investments in general, irrespective of prior familiarity/experience. This again points to a clear belief in the particular appropriateness of crowdfunding platforms for investments in renewables.
- iii. Growth in crowdfunding was seen as significantly more likely for RES than for investments in general, consistent with the evidence in points (i) and (ii) above.
- iv. Those who invest in RES via crowdfunding do so on the basis of a wide range of perceived benefits, although moral/ethical issues dominate, with speed also important.
- v. There was no evidence of any strong worries regarding any particular limitation regarding the employment of crowdfunding for RES. In so far as there was some concern, it related to the issue of investor awareness regarding funding sources, suggesting a priority for action.

The final point is likely to be important – and require nurturing to ensure its maintenance – as the crowdfunding sector faces challenges exacerbated in the particular case of RES by weakening European governmental support for the sector in the current fiscal regime. Nonetheless, the findings in this report point in a multi-faceted way to grounds for positivity in the context of RES investments. The current challenges need not prove insurmountable as long as the optimism underpins clear-headedness – and ingenuity – in attracting the capital needed to ensure critical mass going forward.

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Appendix

Appendix 1: Recruitment Plan

Recruitment of respondents for Survey 1 is required both at the pilot stage and for launch of the full survey.

a) Pilot stage - completed

Initial piloting of the survey took place on the basis of the English version of the survey. Pilot versions were tested for the other three survey languages too once the underlying survey design and semantics was stable following the English pilot. Pilot respondents were drawn from the personal networks of consortium members which ensured adequate coverage in all survey languages plus diversity of spread. Feedback from the pilot stage was used to enhance the survey and check its semantics.

b) Live survey

The survey opened on 15 June and is planned to remain live throughout 2015 at least, with slices taken at suitable points from early autumn to feed into ongoing analysis of results.

Recruitment strategy for the full survey is informed by the strategic focus of the survey on eliciting further evidence from parts of the public already positively predisposed towards investment in renewable energy projects, with a (non-exclusive) focus on the target countries of the project (Austria, Belgium, France, Germany, The Netherlands, UK).

The following recruitment channels will be pursued:

Target group	Recruitment channel	Lead
Existing users of CF platforms	ECN to disseminate to member platforms (of which ever focus) volunteering to distribute the survey to their user base	ECN
Members of the public favourably disposed towards action with positive environmental effect	European network of Friends of the Earth	GLOBAL2000
General public	Project website at www.crowdfundres.eu	Youris
General public engaged in social media with a focus on renewable energy projects and / or crowdfunding	Consortium members to help disseminate survey to relevant forums they are aware of / have standing in	Individual consortium members, coordinated by UNIDUN
Other opportunistically identified target groups	Individual consortium members through ad hoc initiative in coordination with UNIDUN / WIP	Individual consortium members, coordinated by UNIDUN / WIP

Key to adequate recruitment will be targeted campaigns to particular groups and recruitment channels in collaboration with the consortium (WIP, ECN, Youris, FoE, everybody).



Appendix 2: Survey Questionnaire

Crowdfunding Renewable Energy in Europe: Public Awareness and Investing Preferences

Introduction

Thank you for taking this survey. The survey is sent to you by CrowdFundRES, a Horizon 2020 research project funded by the European Commission, and is carried out by a team of renewable energy developers, crowdfunding platforms, academics and crowdfunding experts. Full details of the project and the team can be found on our project website [CrowdFundRES](#).

* 1. You can complete this survey in English, French, German or Dutch. Please choose how to continue:

- I would like to complete this survey in English.
- Je voudrais répondre au questionnaire en Français.
- Ich möchte die Umfrage auf Deutsch beantworten.
- Ik wil graag antwoorden op deze enquête in het Nederlands.

Crowdfunding Renewable Energy in Europe: Public Awareness and Investing Preferences

Overview

Crowdfunding, broadly conceived, involves raising money from individual members of society in order to fund a particular project, typically through interaction via a website or crowdfunding 'platform'. It is part of a broader "alternative finance market" that involves raising money from individual members of society who are brought together through social media to provide the capital necessary for a specific project. For more details and explanations of crowdfunding, see the [Crowdfunding Guide](#), published by the European Commission.

Our survey seeks to determine the extent of the knowledge and preferences of the general public regarding investment in renewable energy projects through Crowdfunding. We have designed the survey in a way that it should take you around 10 minutes to complete it. It follows the principles of informed consent, so we will ask you on the next page to give us your explicit consent to participate. All other questions can be skipped but we would invite you to answer all questions for us since this will help us arrive at more complete and reliable results.

Please continue to the next page and read the information on informed consent. Thank you for your time and participation in this research.

Crowdfunding Renewable Energy in Europe: Public Awareness and Investing Preferences

Informed Consent Form

We would like to ask you to participate in this survey of preferences and knowledge of renewable energy investing and the use of crowdfunding companies in Europe.

The objective of this research is to gain information and develop a better understanding of the public's preferences as regards renewable energy developments and investing and of the role of project developers and crowdfunding platforms in this context. Your participation in this study is entirely voluntary. Completing the survey should take around 10 minutes. The information you provide is confidential. Your name or any other personal identifying information will not appear in any publications resulting from this study; neither will there be anything to identify your place of work or the projects you are involved in. The information gained from this survey will only be used for the above objectives, will not be used for any other purpose and will not be recorded in excess of what is required for the research. There are no known or anticipated risks to you as a participant in this study.

Even though the study findings will be published for the European Commission, they may also be published in international conferences and journals; only those researchers directly involved in this project will have access to the non-anonymised data. These researchers will be bound by the principles outlined above.

Funding for this research is being provided by the European Commission through the Horizon 2020 Framework Programme. Further project information can be found at: [CrowdFundRES](#) . If you have any questions regarding this study or would like additional information please contact Dr Ariel Bergmann, University of Dundee, CrowdFundRES Project Survey and Data Supervisor, at e.a.bergmann@dundee.ac.uk or via j.a.eades@dundee.ac.uk

By filling in this survey you indicate that you understand its purpose and consent to the use of the data as indicated above. Should you decide not to complete the survey, the data you have entered up to that point will be used, unless you indicate otherwise in the questions below.

Thank you for your cooperation,
Professor Bruce Burton, University of Dundee

* 2. I agree with the use of my responses for research purposes in the project as outlined above.

- Yes
 No

* 3. I agree to the use of anonymised quotes from my responses for research and publication purposes.

- Yes
 No

Thank you for consenting. Please proceed to the next page and answer as accurately as you can.



Crowdfunding Renewable Energy in Europe: Public Awareness and Investing Preferences

4. Are you familiar with the concept of crowdfunding?

Yes

No

Crowdfunding Renewable Energy in Europe: Public Awareness and Investing Preferences

5. Have you ever invested via a crowdfunding platform?

Yes

No

Crowdfunding Renewable Energy in Europe: Public Awareness and Investing Preferences

6. Have you ever invested in renewable energy projects via a crowdfunding platform?

Yes

No

Crowdfunding Renewable Energy in Europe: Public Awareness and Investing Preferences

7. How many renewable energy projects have you contributed to through crowdfunding?

- 1
- 2
- 3
- 4
- 5 or more
- Not applicable

8. On what overall scale did you contribute to your most recent crowdfunded renewable energy project?

- < €100 (£75)
- €100 (£75) to < €500 (£375)
- €500 (£375) to < €1000 (£750)
- €1000 (£750) to < €5000 (£3750)
- €5000 (£3750) to < €10,000 (£7500)
- €10,000 (£7500) to < €25,000 (£18,375)
- €25,000 (£18,375) to < €50,000 (£36,750)
- > €50,000 (£36,750)
- Not applicable

Crowdfunding Renewable Energy in Europe: Public Awareness and Investing Preferences

9. Do you plan to invest in crowdfunded renewable energy projects over the next three years?

- Yes
- No
- Maybe

10. What factors do (would) you take into account when deciding to invest in a renewable energy project?
(select as many as apply)

- Transparency
- Information in native language
- Investment model
- Expected rate of return
- Existing operational project
- A project in development
- Time frame (duration)
- Developer reputation
- Technology type
- Sustainability impact
- Geographic location
- Cross-border investment
- Other factors you take into account (please specify)

11. Please rank the following different forms crowdfunding in the order that you are most likely to make use of when investing in a renewable energy project.

<input type="text"/>	Equity-based
<input type="text"/>	Debt-based (bonds)
<input type="text"/>	Debt-based (peer-to-peer lending)
<input type="text"/>	Reward-based
<input type="text"/>	Donation-based
<input type="text"/>	None

12. Please add any additional comments you would like to make to help us understand your ranking in the above question:

13. To what extent do you agree that crowdfunding provides a viable alternative to traditional forms of finance?

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	No Answer
For investments in general:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For investments in renewable energy projects:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. To what extent do you agree with each of the following statements?

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	No Answer
The reduction in Europe of public funding for renewable energy will encourage growth in crowdfunding of renewable energy projects:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The decrease in the lending capacities of European banks will encourage growth in crowdfunding of renewable energy projects:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speed of access to finance represents a benefit of crowdfunding in the context of investment in renewable energy projects:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Crowdfunding represents a less expensive source of funding compared to traditional banks for investment in renewable energy projects:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The collaborative approach promoted by crowdfunding fits with the moral and ethical underpinning of the renewables sector:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Are there any other benefits of crowdfunding in the context of investment in renewable energy projects that you believe to be important but are not mentioned above?(please specify)

15. To what extent do you agree with each of the following statements?

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	No Answer
Potential investors' lack of knowledge about the sources of finance available to renewable energy projects is likely to limit growth in crowdfunding of these projects:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The small scale of funding typically involved with crowdfunding is likely to limit growth in its use for renewable energy projects:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The lack of regulation in the crowdfunding sector is likely to limit growth in its use for renewable energy projects:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Are there any other factors that might limit growth in crowdfunding of renewable energy projects that you believe to be important, but that are not mentioned above? (please specify)

16. To what extent do you agree with the view that crowdfunding is likely to grow over the next five years?

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	No Answer
For investments in general:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For investments in renewable energy projects:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Please add any further comments regarding crowdfunding in general, and/or renewable energy projects specifically?

Crowdfunding Renewable Energy in Europe: Public Awareness and Investing Preferences

Please note: The information requested here will be used to verify that a wide variety of societal groups are reflected in the responses. All information will be anonymised prior to release. No information that would allow identification of individuals will be made public.

18. Country of residence?

19. What is your gender?

- Female
- Male
- No answer
- Other (please specify)

20. What is your age?

- < 18
- 18 to 25
- 26 to 45
- 46 to 67
- 68 or older
- No answer

21. What is your average income level per year?

<€30,000 (£22,500)	<input type="radio"/>
€30,000 (£22,500) to €45,000 (£33,750)	<input type="radio"/>
€45,001 (£33,751) to €75,000 (£56,250)	<input type="radio"/>
€75,001 (£56,251) to €150,000 (£112,500)	<input type="radio"/>
> €150,000 (£112,500)	<input type="radio"/>
No answer	<input type="radio"/>

22. Highest Level of Education Qualification

Secondary School

Bachelor Degree

Masters Degree

Ph.D.

No answer

Other (please specify)

23. Please list any professional qualifications:

24. How did you learn about this survey?

Environmental group / discussion group

Crowdfunding platform

Investors' website / discussion forum etc.

Facebook

Twitter

Other social media

CrowdFundRES website

No answer

Other (please specify)

25. Would you like to receive a summary of the survey findings?

(Your communications will be treated as confidential and protected. It will only be used to distribute the report. All contact information will be deleted upon completion of the project.)

Yes (Please enter your contact details below)

No

26. May we contact you again in relation to the CrowdFundRES research project?

(This information is confidential and is protected. It will only be used in connection with this research project. All contact information will be deleted upon completion of the project.)

Yes (Please enter your contact details below)

No

27. Contact Details

Name

Email Address